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**AN EXAMINATION OF FINANCIAL  
MANAGEMENT APPROACHES WITHIN  
GROWTH ORIENTED MALAYSIAN SMALL  
BUSINESSES: THE FOCUS ON INVESTMENT AND  
FINANCING DECISION-MAKING**

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Mac 2000

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**ABSTRACT**

This doctoral thesis attempts to explore and understand small business financial management by (i) adapting a methodology capable of circumventing the weaknesses inherent within the existing research in this area; (ii) focusing on financial decision-making *processes*; (iii) conceptualising financial management within a total context of small firm activity and strategic development; and (iv) accommodating consideration of the unique characteristics and idiosyncrasies of small business operation. The research reported in this thesis has made a distinctive contribution to small business management knowledge, firstly, by adding to what is already known about small firm financial management within a Malaysian context; and secondly, by the development and application of a novel methodology for researching this type of small business development issue.

The research process commences by addressing the philosophical foundations of the research. The philosophical standpoint of ‘internal realism’ which propounds the inter-subjective construing of reality and the role of fact and value in the construction of knowledge allows a research method that is tailored according to the nature of the issue under investigation. It highlights the value of utilisation of partial frameworks of insight from existing levels of knowledge in the area under study for the developing of a solid guiding framework to foothold the research. The process in its entirety is founded upon a version of epistemological bootstrapping.

A conceptual footholding framework is thus built from existing insight into (a) the scope and definition of financial management, (b) the traditional financial management concepts, tools and techniques, (c) the notion of rationality in decision-making, and (d) the internal and external small business context and their effects on financial management.

A multiple case study research method was justified based on specific research questions raised by the conceptual framework and the strengths of the research method highlighted by the literature. Personal interview was first carried out on ten firms who fall into the definition of small firm used in this study. This was followed by in-depth interviews with five of these firms.

The research findings were presented in the form of five individual case studies which include analyses of identified investment and financing decision-making incidents to reveal the findings for each firms. An analytical framework was developed to encapsulate a total contextualisation of the critical incidents under analysis including ‘vertical’ and ‘horizontal’ dimensions of context and consideration of any areas of interconnectedness between these dimensional forces. Financial decision-making incidents were analysed utilising decision-making theory and traditional financial

management knowledge-bases were used as comparative frames of reference to attempt to derive understanding of actual financial management approaches adopted. The relevance and impacting nature of external and internal factors on the ultimate nature of financial management approaches adopted by the small firm were identified.

In short, the distinctiveness of the study in terms of research output is the thesis revelation from the cases in the Malaysian context: some form of financial management *is implicitly* utilised by most of the small businesses in their financial decision-making. Most of the financial management approaches involve the use of a tool similar to the payback tool to infer the payback criterion and the 'net cash flow' criterion. But key differences between the practised payback technique and the textbook payback technique were identified across all the case studies, together with variations of payback techniques. The application of a product profitability measure together with payback technique is also found. Crucially, there are incidents where (i) financial actions are also influenced by non-financial factors, which include product quality, the firm's image and owners satisfaction, (ii) the non financial factors are assessed in terms of the indirect financial benefits and, (iii) non-financial tools, such as implicit strategic analysis and judgemental cost-benefit analysis, *provide major guidance* to the decision-making.

In the area of financing decision-making both financial criteria and non-financial factors are found to influence the decision to choose a specific source of financing. The main financial criterion used is the financing cost which is measured by the interest rate and the opportunity cost. Non-financial factors that are found to be considered in the decision-making are the ease and fast financing process, the owner-managers negative perception on borrowing and the norm financing practice.

The analysis on the 'gap' between the identified financial management approaches and traditional financial management approaches indicate: (i) no utilisation of traditional financial management NPV, IRR or any other forms of discounted cash flows criterion, tool and techniques, (ii) a vast application of payback criterion, (iii) the presence of gaps between the payback tool utilised by the small businesses and that prescribed in the literature, (iii) the presence of some level of appreciation of the traditional financial management concepts of wealth, cash flow, risk and opportunity cost, (iv) the utilisation of tools and techniques outside the domain of the traditional financial management criteria.

Contextual analysis provides indication that the financial management approaches adopted in growth oriented small business investment and financing decision-making are influenced by expressive rationality, bounded rationality, the presence of non-financial benefits and indirect financial benefits and owner-managers' objectives, lack of financial management expertise, accounting orientation and strategic orientation.

Integral to the research process which facilitated the unfolding of the above output is the underlying epistemological bootstrapping process which manifests in a distinctive methodological contribution in the form of novel small business methodology based on key 'operating features' which include: i) a conceptualisation of the small business as qualitatively different from the large company, thereby encapsulating in the build up of understanding the inputs of organisational culture and the embedded role and

characteristics of the owner manager; ii) the adoption of a 'total contextualisation' of small business development activity as a 'frame' within which to position and examine financial management so as to incorporate and understand the significance of relevant external and internal contextual factors; and iii) the utilisation of decision-making theory to demonstrate the crucial significance and impact of variables and factors which to date are overlooked by the application of rational analytical frames.

In its totality, the study has expanded the knowledge of small business financial management, specifically within a Malaysian context but also holding significance for wider operating contexts, by revealing the actual nature and form of financial management approaches practiced in selected growth-oriented small businesses. The resultant knowledge holds significantly higher potential for academicians and management trainers in the formulation of research and support programme approaches than the ambiguous, theoretically oriented knowledge revealed by many past studies.



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# CHAPTER ONE



## CHAPTER ONE

### INTRODUCTION TO THE STUDY

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#### 1.1 INTRODUCTION

Small business has been receiving an increasing amount of attention from both academicians and the policy makers due to its association with the economic growth, political stability and social well being of a nation. In addition to generating employment opportunities, small businesses help the mobilisation of individual saving for investments, have a favourable influence on income distribution, serve as a training ground for developing the skills of industrial workers and entrepreneurs, and provide valuable inputs and supportive services for large scale industries (Yahaya, 1995).

In Malaysia, the emphasis on small business development has been evident since the 1960's. The Second Malaysian Plan (1970–1975) had already acknowledged the above potential contributions of the small business sector to the nation's industrial development. In 1991, the Prime Minister, Dr Mahathir Mohammad, highlighted that:

SMI will be one of the primary foundations for our future industrial thrust. The government is fully committed to its healthiest development. (Mahathir, 1991: 413)

The current significant emphasis placed by the Malaysian government on the small business sector, or the Small and Medium Industry (SMI) sector as it is widely referred to in Malaysia, is reflected in the establishment of the Ministry of Entrepreneurial Development in 1993 and the long list of government supports and services designed to promote this sector (Gan et al., 1995a).

The importance of the small business sector in Malaysia is also justified by the fact that SMIs constitute about 80 percent of manufacturing establishments.

In addition to an important placing on the political agenda in almost every nation, in the academic world small business has emerged as a separate area of study due to the increasing awareness among scholars of the uniqueness and distinctive idiosyncrasies of small business as compared to the typical, more familiar, larger business organisations on which the past development of knowledge, theories, models and management techniques are substantially based. This separate area of study is reflected in the increasing numbers of higher learning institutions offering small business subjects and the increase in the amount of literature on the subject.

Financial management as any other sub-discipline in the study of management, should contribute to the development of the small business area of study. Indeed, given the ultimate importance of financial resources to any business organisation and the revealing fact that small businesses have more limited financial resources compared to their larger counterparts, it can be argued that financial management should be given a crucial role in the management of small business.

Acknowledging the importance of the small business sector in Malaysia and the potential role of the financial management function to the well being of this sector, this thesis thus aims to contribute to the development of the emerging body of knowledge on small business by focusing study on the financial management approaches in Malaysian growth oriented small businesses.

## **1.2 PROBLEM STATEMENT**

As the financial wealth of a firm is an important issue to the firm itself, and to the economy and nation in which it operates, traditional financial management which aims to guide organisations in taking decisions that would increase shareholders wealth should have a crucial role to play in managing a firm, large or small. This significance of financial management is reflected in the following statement:

What must be true is that firms cannot continually make decisions which reduce shareholders' wealth since this would imply that the worth of the firm would constantly be diminishing. Each firm has only a finite amount of wealth,

so sooner or later it would be forced out of business by the result of such decisions. (McLaney, 1991: 18)

The belief of the importance of the financial management function has initiated the publication of numerous 'how to do' small business financial management texts (for example, Dewhurst and Burns, 1989; Barrow, 1991 and Meredith, 1986) and the offering of small business financial management training programmes.

The 'how to do' materials, however, are largely derived from the mainstream financial management literature which can be fairly said to be targeted at the large stock exchange quoted companies. Thus, there is not much difference between the tools and techniques prescribed to the small business and those prescribed to its large counterpart, except for very few exceptional potential applications. This exception includes the traditional tools and techniques that have a clear association with the assumption of large firms such as the efficient capital market assumption and the well-diversified portfolio assumption and thus are ignored in small business financial management texts and materials. A further exception includes a few tools that have been modified to suit the small business's operating context such as interdependency between financing and investment decision-making assumptions. Other techniques are purported to be applicable to any types of firm, regardless of size, because either they are based on general economic assumptions about business organisations and on mathematical theory, or the basic financial management principles underlying the tools and techniques are believed to be realistic to all business organisations.

Yet, little is actually known about the extent to which the traditional tools and techniques prescribed are utilised and useful in the actual management of small businesses, especially within Malaysian small businesses. This is due to the fact that no relevant research has been conducted in Malaysia, while research which has been conducted in the U.K has several inherent methodological and conceptual weaknesses, among which are:

- (1) the lack of insight on just what constitutes financial management, which has driven some researchers to focus more on the accounting functions such as financial

reporting and bookkeeping while neglecting to direct attention to the major financial management function which is financial decision-making.

- (2) the focus of enquiry on the existence of financial management tools such as budgeting or cash flow statements, but not their actual utilization in financial decision making. There is a weakness in using the former finding to infer about financial management application because the existence of tools does not necessarily refer to the utilisation of tools. Some financial information may be prepared for the sake of formality or to satisfy certain statutory requirements instead of guiding financial decision-making- this is supported by situations found by Storey (1994) in growing small businesses and the situation reported by several studies in Australia (McMahon and Holmes, 1989). Furthermore, recent computerisation and improved information technology may provide the business with all kinds of financial information even though it is not needed by the management.
- (3) the use of structured mail questionnaires with closed-questions and over simplistic frameworks in many studies on financial management (Jarvis et al., 1996) which give rise to various conceptual and methodological pitfalls such as the possibility of drawing wrong conclusions due to misunderstanding of owner-managers about certain terms or concepts and the possibility of the 'enactment problem' (Churchill and Lewis, 1986; Jarvis et al. 1996).

Moreover, the relatively large amount of theoretically-based 'how-to-do' literature, compared to that which is practically based, and the focus of past small business financial management studies on the traditional tools and techniques instead of on the decision-making process and the tools small businesses actually utilise, have given rise to other serious issues as portrayed by Keasey and Watson (1993: 13-14):

Somewhat surprisingly, given the number of textbooks and articles on the subject of finance, there is relatively little known about the practical aspect of financial decision-making of firms... Instead of a subject that is based upon understanding and improving what people do in practice, we have a subject built around formal models so heavily dependent upon strict rationality

conditions and tractability requirements that the descriptive nature and policy relevance of their conclusions are always open to considerable doubt.

Two important issues regarding small business financial management which can be drawn from the above statement are the actual nature of financial management practice and the practicality of existing tools and techniques within the small business operating context.

Although there is no study conducted on financial management approaches adopted by Malaysian small businesses, there is some indication of a gap between what is being practised by the owner-manager and what is being prescribed by the management based theory. A proposition by Gibb (1983) about small businesses having a relative lack of formal management information systems and use of techniques is likely to be true in the context of Malaysian small business and thus would lead to non-utilisation of sophisticated financial management tools and techniques. Furthermore, a research study conducted in Malaysia reveals that among the more common problems faced by bank managers when dealing with small business loan applications are the lack of owner-managers' knowledge in accounting and working capital management and inability to determine the amount of loan requirement (Haron and Shanmugam, 1994). This finding can be an indication of low utilisation of financial management among Malaysian small businesses.

Above all, as argued by Jarvis et al., Ang (1991, 1992), McMahon (1993) and Petty and Bygrave (1993), the different operating environment of small business compared to that of typical large firms as shown by many studies may have critical implications for their financial management practices.

Taking on board the presumption that small business owner-managers are 'rational' creatures when it comes to 'money' and the fact that a great number of small businesses do survive and prosper, the author recognises that there is substantial merit in researching the nature of the actual financial management approach utilised by small businesses as suggested by Keasey and Watson. However, at this stage the author is not implying that the 'practice' is better than the 'theory', as has continuously been debated,

even in the context of large firms (see Romano et al., 1988) but rather suggesting the possibility of identifying ‘good practices’ and ‘good theory’ as far as the small business unique operating context is concerned. This is similar to finding answers to questions such as that posed by Petty (1991: 89): “Does finance have anything to say to small business and does small business have anything to say to finance?”

To answer the above question would not only require one to look for the tools and techniques actually being used but also to understand the rationale of small business actions and in-actions and to understand the context within which the actions were undertaken. Writings by Ang (1991), Pettit and Singer (1985), Petty and Bygrave (1993) and McMahon (1993) have proposed some of the idiosyncratic operating factors that contribute to the uniqueness of small business financial management. Yet research in the past has tended to focus more on the ‘what do you do’ questions and neglect the ‘why do you do it’ questions (Lumby, 1994) and has not linked the financial management approach to its internal and external context, which leaves the question posed by Petty largely unanswered.

The depth of understanding of the factors that influence the utilization of a particular approach and the factors that influence a particular financial decision at the same time help in explaining the non-utilisation of traditional financial management tools and techniques that many academics have been preaching about. With knowledge of all these factors only then can justification of whether a practice is in fact a ‘good practice’ and whether a theory is in fact a ‘good theory’ be fairly made.

In addition to the above issues, this study is also driven by the methodological and conceptual weaknesses of past research in the management discipline in general and in the small business financial management discipline in particular. This has to a limited extent been highlighted in the above discussion. The study thus emphasises on the need for a design of an appropriate research method conducive to the effective investigation of the issues highlighted above.

### **1.3     THE BROAD RESEARCH QUESTIONS**

Based on the adoption of an ‘epistemological bootstrapping’ research approach (which will be justified and discussed in chapter 2), insight from the literature and key informants which were consolidated in the ‘problem statement’ section has raised the following key broad research questions:

- (1)     What is the nature and form of the financial management approaches adopted in small businesses and to what extent are these approaches helpful in guiding their financial decision-making and financial-related change action?
- (2)     What is the nature of ‘match’ and ‘gap’ between traditional financial management approaches as reflected in the financial management literature and texts, and approaches integral to real small business practise?
- (3)     What key contextual factors influence financial management approaches adopted and the ‘match’ and ‘mismatch’ or ‘gap’ between these approaches and the traditional financial management approach, and what is the form and nature of such influence?

### **1.4     THE OBJECTIVES OF THE STUDY**

#### **Overall Objective:**

The objective of the study is to improve understanding of the nature and form of financial management approaches in Malaysian growth-oriented small businesses and to offer insight into the potential for enhancing effective small business financial management practices, by accommodating consideration of the unique characteristics and idiosyncrasies of small business operation.

### **Specific Objectives:**

- (1) To design and develop an innovative research methodology in order to circumvent the major pitfalls and shortcomings inherent in small business research, as a foundation for facilitating the achievement of the following specific objectives.
- (2) To examine the nature of financial management approaches (financial-related concepts, tools and techniques) adopted in small business financial decision-making.
- (3) To examine the ‘match’ and ‘gap’ between financial management approaches practised and traditional financial management approaches (traditional financial management concepts, tools and techniques) to provide insight as to the extent of traditional financial management application in small business.
- (4) To enhance understanding of how various contextual factors including the characteristics and idiosyncrasies of small businesses influence the extent of traditional financial management application and the nature of financial management approaches.
- (5) To offer insight into the adequacy and appropriateness of traditional financial management approaches, concepts, tools and techniques for small business and the way in which they need to be modified to suit small business operating conditions, idiosyncrasies and requirements.

In order to afford a workable investigation and achievement of depth of insight and analysis, the study focuses on two particular areas of small business financial decision-making activities: the fixed investment decision-making and the financing decision-making.



## 1.5 DEFINITIONS AND TERMINOLOGIES

In an attempt to circumvent the conceptual weaknesses of past research, most of the following definitions were derived from the review of past literature in the related area. The discussion on the derivation of the definition for the terms listed below is undertaken in chapter 3 and chapter 4.

### (a) *Small business*

A small business in this study is defined as businesses satisfying the following criteria:

1. shareholders funds of less than RM 2.5 million
2. more than 10 but less than 200 full time employees
3. independently owned in terms of principle decision-making

### (b) *The owner-manager*

The owner-manager refers to the owner of the small business who is actively involved in managing the firm.

### (c) *Financial management approach*

Financial management approach is defined as “an approach that utilises financial criterion and/or financial tools and/or financial techniques to guide financial decision-making”.

### (d) *Financial decisions*

Financial decisions refer to any decisions pertaining to the allocation of funds or the acquisition of funds. They are classified into three types of decision:

- \* The capital expenditure decision, which refers to any expenditure involving the acquisition or the disposition of fixed assets;
- \* The financing decision, which refers to any decision to acquire medium to long term funds, either internally or externally;
- \* The working capital decision, which refers to any decision involving current assets and current liabilities.

(e) *Financial criteria, tools and techniques*

Financial criterion is defined as any justification or characteristic or factor or concept, which is the function of financial variables or measures, by which the desirability or viability of the alternative actions in the decision-making incident are judged.

Financial tool is defined as the calculation for measuring financial criteria.

Financial technique is defined as the technique of utilising financial criterion to guide the decision-making.

(e) *Traditional financial management concepts, tools and techniques*

Traditional financial management tools and techniques are tools and techniques prescribed in the mainstream financial management texts. Traditional financial management concepts are financial concepts underpinning the development of traditional financial management tools and techniques. The thorough discussion of each of these concepts, tools and techniques is undertaken in chapter 3 of this thesis.

(g) *Subcontractor and Vendor*

A subcontractor is defined in this study as the business involved in the giving of a service of moulding a part, a component or a product with the mould and raw materials provided by the customers. This definition is based on the usage of this terminology among the small businesses in this study.

The vendor is defined in this study as the firm involved in the supplying of parts and components to their customers, according to the customers' specification.

(h) *Machine cost*

Machine cost refers to the charge for using a particular type of machine, usually quoted in a per hour basis or per unit basis.

(j) *Financing costs*

Financing cost includes all the costs of utilising the financial instruments. For example, if borrowed money is used, the interest paid on the money and any expense incurred in raising the main sum such as legal cost would be the financial costs.

## **1.6 SCOPE AND LIMITATIONS OF THE STUDY**

### **1.6.1 Scope of the Study**

1. This study will focus only on capital investment/expenditure decision-making and medium to long term financing decision-making. This is not in any way downgrading the importance of working capital decisions to small business but the limited scope is justified by the following:

i) Given the need of this study for a research approach built upon a well developed conceptual framework and utilising an in-depth case study research method focusing on decision-making processes, it is felt that the amount of time available is not sufficient to enable the study of all types of financial decisions undertaken in the small business development process.

ii) The choice to exclude working capital decisions is based on the fact that at the time the study was undertaken, empirical research on this issue was being carried out elsewhere (e.g. Jarvis et al., 1996) while similar study pertaining to capital investment and medium to long term financing decision has not yet been undertaken.

2. The study focuses only on the plastic parts and components industry sub-sector within Malaysia. The choice of this sub-sector is justified in chapter 4 of the thesis.

3. Given the timing constraint of this study which is partly due to the actual field-work being undertaken in Malaysia for a period of six months and the requirement for an in-depth insight of each incident and case, the final analysis of this study is based on eight (8) capital investment decision-making incidents and seven (7) financing decision-making incidents, all from five (5) selected case studies.

### **1.6.2 Limitations of the Study**

Apart from the limited scope of this study highlighted above, the following are further limitations:

1. The selection of the case study to some extent is made based on convenience sampling even though the early attempt was to use 'theoretical sampling'. This limitation is due to an inability to gain sufficient co-operation and insight from the firms first selected through theoretical sampling, while other owner-managers have shown their willingness to co-operate. Since in this study the co-operation from the owner-managers is vital, selection is made based both on the owner-managers' willingness to co-operate and key characteristics of the firms. This, however, does not represent weakness in this study because the objective of the study is not to develop theory but to explore and understand financial management in its total 'application' context.
2. More rigorous information for the case study material is probably provided by the author actually observing the decision-making process taking place, such as being present in meetings or discussions related to a particular decision. This is, however, almost impossible because decision-making taken in small businesses is mostly undertaken in an informal manner; no appropriate incidents of decision-making could be found taking place in the selected firm at the time the field work was conducted; and there are potential biases which would derive out of the author's presence.
3. The quality of the data very much depends on the extent to which the key informants' interpretation of the answers are true or accurate. The concealing of relevant insight or distorting of information given cannot be dismissed during interface with small business owner-managers- not least since some owner-managers have been found to construe certain lines of research enquiry as criticism of their management approaches.
4. The research represents one investigator's on site appraisal of the situation coupled with her own predisposition and biases. However, this problem is minimised by

making explicit as much as possible, the assumptions and framework upon which the study is based.

## **1.7 THE CONTRIBUTIONS OF THE STUDY**

The contributions of this study can be seen from the supporting inputs to the small business academia, trainers and consultants, to the banks and other providers of funds, to the financial well-being of the small business sector and to the Malaysian economy as a whole.

Firstly, greater depth of understanding on the nature of the actual financial management approaches adopted by small businesses and the internal and external factors impacting on these approaches and constraints associated with the application of traditional financial management approach within small business are of great value to the following:

- a) the academics attempting to (i) develop the theory of small business financial management, (ii) test existing theory, (iii) develop new tools and techniques or make adjustment to existing techniques, in order to address idiosyncrasies of small business operation;
- b) trainers attempting to design and deliver appropriate financial management programmes;
- c) consultants entering small business and attempting to gain a contextual understanding of constraints imposing upon the business and its development;
- d) bank managers attempting i) to understand the potential of small business loan application from a context broader than pure financial considerations and ii) to guide small business owner-managers from the standpoint of a better understanding of underlying problems imposing on small businesses.

The above contribution to various parties involved with small business will then benefit the small business community. Such benefits may take the form of increased utilisation of financial management within small businesses as a result of the availability of more suitable training programmes. This would enable their financial resources to be more efficiently managed which would in turn promote their survival and growth. Another potential benefit is the enhancement of working relationships between bank managers and small business owner-managers as the result of bank managers' better understanding of the constraints and contextual factors facing small business in implementing financial management approaches.

Finally, the economy as a whole will arguably benefit from the increased utilisation of financial management in small businesses since small business will be guided towards a more efficient allocation of scarce financial resources in the economy.

## **1.8 THE ORGANISATION OF THIS THESIS**

The following is a summary of each chapter presented in this thesis:

Chapter 2, The Research Approach- This chapter will review the weaknesses and pitfalls of management research and small business research, the philosophical issues underpinning research methods and the weaknesses of the positivist and normativist philosophical standpoints. An alternative philosophical standpoint of non-positivism-internal realism drawn from Archer (1988) is then suggested followed by the discussion of its implications for the research method of this study.

Chapter 3, The Development of the Conceptual Framework to foothold the Research - As one important implication of 'internal realism' is the need for conceptual frameworks that will raise relevant research questions and clearly identify key assumptions upon which the research is founded, in this chapter three sub-frameworks will be developed utilising related literature and insight from key informants. The development of these frameworks represents the 'bootstrapping' process which forms the beginning and integral parts of the overall research process.

Chapter 4, The Research Method – As the philosophical standpoint of ‘internal realism’ suggests the use of an ‘horses for courses’ research method in the penultimate part of the study, this chapter firstly justifies the research method to be utilised and then elaborates the research design.

Chapter 5, The External Operating Environment – This chapter will present the external context of the small business under study which includes the Malaysian economic climate, government policies on small business development and the operating nature of the sub-sector under study. This presentation is necessary given the adoption of a holistic ‘systems view’ and a strategic development perspective.

Chapter 6, The Analysis and Findings– This chapter will commence with the build-up of the analytical framework/approach used, followed by the presentation of five individual case studies, together with the analysis of each case and the findings that are derived from each case analysis. The analysis and findings relate to the forms of financial management approach adopted in selected incidents of financial decision-making, the extent of traditional financial management application, the strengths and weaknesses of the adopted approach and the factors that influence the nature of the financial management approach.

Chapter 7, Summary of Key Findings – This chapter will present the summary of all the financial management approaches adopted by the case small businesses which guided their investment and financing decision-making. It will also summarise the gap between these approaches and traditional financial management approaches and the strengths and weaknesses of the adopted approach. Finally the chapter will highlight the key factors that are found to influence the nature of the financial management approaches and thus explain the gap between traditional financial management approaches and the practised financial management approaches.

Chapter 8, Considerations for the future – The study will conclude by presenting the summary of the study and providing guiding insight and suggestions for small businesses, policy makers and academicians.



# CHAPTER TWO

## CHAPTER TWO

### THE APPROACH TO THE STUDY

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#### 2.1 INTRODUCTION

One of the main issues raised in the introductory chapter of this thesis is the methodological and conceptual weakness of past research in the area of small business financial management which seems to pose a major barrier to the advance of knowledge in this area. The study thus emphasises the development of a research method that is capable of circumventing or minimising these potential weaknesses.

In this chapter, rather than stating and discussing the research method to be utilised as normally undertaken by past researchers, the author commences by reviewing various weaknesses and pitfalls of management research and small business research in general as highlighted by writers such as Whitley (1984), Kaplan (1984), Stanworth and Curran (1976), Bygrave (1989), Gibb (1992), and Gibson (1992). As some of the pitfalls can be associated with weaknesses inherent in the two types of social behavioural research approach, the qualitative and quantitative research approaches, the debates that have taken place between the two approaches will then be considered. This leads into the discussion on the philosophical issues underpinning research methods with reference to works by Archer (1988), Bryman (1988) and Jean (1992) which reveal flaws in the 'positivist' view and 'normativist' view, the two extreme traditional philosophical standpoints. The weaknesses thus give rise to the need to reflect on the possible existence of an alternative standpoint.

The alternative philosophical standpoint of non-positivism-internal realism drawn from Archer (1988) and Wyer (1990) is then considered. The implications of this philosophical standpoint for the approach adopted in this study are then discussed.

## **2.2 PITFALLS IN MANAGEMENT AND SMALL BUSINESS RESEARCH**

Upon inception of this study, the author became aware of several potential pitfalls in management research and small business research. These weaknesses will be used as the guidance for the design of a most appropriate research method for this study.

### **2.2.1 General Pitfalls in management research**

Wyer (1990) re-emphasised the weakness raised by Kimberly et al. (1984) on the static orientation of many organisation research studies which are seen as a major weakness since, “organisations are fluid and dynamic; they move in time and in space; they act and react”. One of the main reasons highlighted for such an orientation is the use of cross sectional research that tends to focus the understanding of an organisation at only a particular point in time while ignoring the organisation’s origins and development and their influence on the present structure. In addition to this, they argue that ‘snapshots’ may run the risk of over-personalisation which means that the data from the respondent (the organisation member) also may be static. All of this can lead to a limited understanding of an area under study. Commenting on the use of age as a variable in this kind of study, Kimberly et al consider it as insufficient because chronological age does not reveal the rhythms and cycles that the organisation has been going through. Rather it is suggested that focus on the organisational cycle can enhance the understanding of the organisational phenomena under study.

Archer (1988) draws on Whitley (1984) who has pointed to the ‘fragmented adhocracy’ of management study. This characteristic derived from the tendency among researchers to focus on distinct topics or issues that are small without incorporating the work of others. It is epistomised by the highly differentiated and divergent research strategy with little common background knowledge or shared intellectual objective.

Related to the above, is the absence of a conceptual framework in many management studies (Moorby, 1994). This is often the case in much purely inductive or direct

research which results in 'brute empiricism' (Archer, 1988) and the research being 'ad hoc' (Lakatos, 1970 in Archer, 1988), fragmented and built on ill informed foundation.

Kaplan (1984) in an indirect way points to the weakness in management accounting research by making the comparison between the innovation that occurs in businesses and the innovation that occurs in academic institutions. He emphasises:

I am impressed by the difference between innovation that occurs in businesses and the innovation that occurs in academic institutions. The development in cost accumulation and cost control in the railroads, in the steel industry, and later in the vertically integrated multidivisional firms, such as Du-Pont and General Motors, spread rapidly to other organisations. Managers in these innovations can see how well the new procedures worked in practice . . . . In contrast, the recent academic management accounting literature is devoid of references to actual organisation. Today's researchers do not learn about cost accounting and management control from IBM, Texas Instruments, Procter & Gamble, 3-M, Johnson & Johnson, or McDonald's. Rather the reference in today's management accounting literature are to the economists. . . That is, the contemporary researchers' knowledge of managers' behaviour is based not on studying decisions and procedures of actual firms, but on the stylish models of managerial and firm behaviour that have been articulated by economic theorists, who themselves, have limited practical or first-hand insight of the behaviour they have conceptualised. (Kaplan, 1984: 406-7).

Kaplan infers that the management accounting discipline has not benefited much from the 'abstract theorising' and empirical investigation (Archer, 1988) using models whose origins are from individuals with limited first hand insight of firm behaviour. He then calls for the development of knowledge through field based inductive research of firms decision processes. "If managerial accounting research is to progress, we will need to start collecting our anecdotes from 1980s corporations" (Kaplan, 1984: 416). The problematic relationship between theory and practice is still in existence as underlined by Christian (1994).

### **2.2.2 Pitfalls in Small Business Research**

Further to the above-mentioned potential weakness, there are others relating specifically to research in small business. The methodological issues in small business research have indeed been widely addressed by several small business scholars.

The use of quantitative research techniques in small business research has been seen by many authors as a major weakness of much of the research. Gibson (1992: 4) argues that “we don’t seem to be developing; we just seem to be observing and reporting, quite often tenuous relationships, which offer no means of going forward to develop a theoretical understanding”. According to Gibson, “we missed the pre-theory and theory development stage and went straight to observation”.

Related to the use of quantitative, deductive research, Gibb and Davies (1990) highlight the potential weakness of ‘abstract theorising’ resulting from the tendency to model small business management using parameters selected without broad theoretical underpinning in terms of how the parameters relate to and interact with one another. The use of statistical techniques may infer that a particular variable influences other variables but careful analysis might reveal that the relationship does not hold.

Gibb and Davies also criticise the over-emphasis upon the use of the survey, quantitative, deductive approach in the search for ‘representativeness’ since in reality there is such diversity of the small firm sector that it is unlikely to render a ‘representative’ sample.

Stanworth and Curran (1976) criticise the ‘positivist’ view adopted in the study of small business activity because this view fails to consider that small business is an ongoing social entity constructed out of meanings and actions of those who participate in the firm.

Bygrave (1989) emphasises the tendency for researchers to assume that small business progress can be described by smoothly changing, linear, deterministic models that can be analysed with regression equation, a tendency he termed the ‘physic envy’. The weakness in this kind of analysis is the inability to handle entrepreneurship disjointed events that disrupt stability. Another weakness derived from ‘physic envy’ is the tendency to isolate ‘the part from the whole’. With regard to small business research, the tendency is to separate owner-managers from their action or the small business

itself. Bygrave therefore affords less attention to the use of sophisticated statistical technique in small business.

Building on Kaplan's criticism of the use of economic models in management study, their utility, specifically in the context of small business study, represents a potential weakness in small business research. Gibson (1992) highlights that the emphasis of neo-classical economics is on the rational decision-makers and fails to encompass entrepreneurial action. He stresses that concern must be with human beings not interchangeable economic units.

Gibb and Davies also highlight the potential 'lack of insight' of researchers into small business which can reduce the validity of the research. It can result in the use of terminologies that carry different meanings to small business owner-managers. This pitfall tends to occur more in conjunction with the weakness of 'abstract theorising', highlighted above, through the use of structured questionnaires. Moreover, the lack of insight of researchers on what certain terms or concepts really mean from the theoretical point of view is another weakness that often occurs and which distorts the findings of these studies.

A further pitfall of small business research raised by Gibb and Davies is the use of a 'single discipline' framework whereby researchers seek to "explain within the framework of traditional discipline and therefore to accommodate reality to the concepts of the discipline" (Gibb and Davies, 1990: 135). This could lead to the testing of theories which are inadequately grounded or 'partial' theories in social science with the research resulting in bias. The call is thus, for a 'multi-disciplinary' research approach to studying small business.

Wyer (1995) drawing on O'Farrell and Hitchens (1988) points to the tendency among small business studies to be based on assumptions that small firms are 'microcosms of large companies'. Wyer emphasises the need to consider that small businesses are qualitatively as well as quantitatively different.

Whilst most of the above writings suggest the use of qualitative, field based research to replace the commonly used survey method, McMahon and Holmes (1991) underline that research on small business financial management is too descriptive and thus suggests the need to move into more advanced modelling type research studies that are capable of making prediction.

### **2.3     THE DEBATE BETWEEN QUANTITATIVE AND QUALITATIVE RESEARCH TRADITIONS**

Many of the pitfalls raised are indirectly associated with management research being conducted in the quantitative, deductive mode. There is the need to pursue further the quantitative/qualitative research debates for further clarification before confirming the research approach for this study.

Research methods in management research and other behavioural studies can be broadly classified into either the quantitative approach or the qualitative approach. Although there is some disagreement on this classification, even disagreement on the use of the label ‘quantitative’ and ‘qualitative’ research, many research method writers now agree on certain characteristics that differentiate quantitative from qualitative research approaches (see Bryman, 1988: 94).

There are actually today more debates on the role of the qualitative approach than in the past. In the past, the quantitative approach which imitates the natural scientist’s research approach was regarded by many as being superior to the qualitative approach in that the latter was viewed as a somewhat ‘second rate activity’ that acts as a “means of throwing up hunches and hypotheses which can be tested more rigorously by quantitative research” (Bryman, 1988: 95). Although this is still the position held by many quantitative research proponents, considerable growth in the interest and application of qualitative research can be seen to have been taking place since the early seventies (for example, Mintzberg, 1979; Adler, 1985 and Bygrave, 1989). The assertiveness of qualitative research proponents who see “it as an end in itself, in particular because of

its capacity to expose actors' meaning and interpretations" (Bryman, 1988: 95) has given the qualitative approach some credibility.

Archer (1988) summarises the various positions on the role of the qualitative research approach, as reflected in the many writings and research works, into three distinct positions. One position sees qualitative study as 'complementary on an equal footing' whereby qualitative research can address different aspects of the study that are not accessible using quantitative research. Another position is that of the quantitative proponent who sees qualitative research as the 'less desirable and soft approach' that has to be used in certain states of theoretical development where the quantitative approach cannot be employed; a well known example is the exploratory stage of knowledge. The main weaknesses that are highlighted with regard to the use of the qualitative approach is the inability to generalise, which from this position's point of view makes the findings of a more tentative nature. The final position, which is the position of the qualitative proponent, sees the qualitative approach as 'the only true approach' to the study of social behaviour because it permits access to human interaction and takes into account the differences between people and the object of the natural science.

## **2.4 THE TRADITIONAL PHILOSOPHICAL STANDPOINTS**

The frequent use of terms such as 'positivism' and 'objectivism' associated with the quantitative research approach implies that the approach is based on certain underlying assumptions. This is supported by Rist (1977: 62) who claims that each of the two research approaches rest on "an interrelated set of assumptions about the social world" (in Bryman, 1988), and Filstead (1979: 45) who emphasises:

quantitative and qualitative methods are more than just differences between research strategies and data collection procedures. These approaches represent fundamentally different epistemological frameworks for conceptualising the nature of knowing, social reality, and procedures for comprehending these phenomena.



Archer (1988) and Jean (1992) clarify that the quantitative and qualitative research traditions are based upon different sets of assumptions or what can be referred to as the 'philosophical standpoints' on the nature of reality (the ontology) and the nature of knowledge (epistemology) and explain the divergent philosophical standpoints underlying the two traditional research approaches.

The quantitative approach is underpinned by the philosophical standpoint of 'positive external realism'. 'External realism' is an ontological position which views reality as existing objectively and independently of an individual's appreciation of it (Archer, 1988; Jean, 1992). This is also referred to as the 'objectives' view. This implies that the "social world external to individual cognition is a real world made up of hard, tangible and relatively immutable structure" (Burrell and Morgan, 1979 in Jean, 1992: 89). This ontological position leads to the epistemological point of view referred to as 'positivism' which assumes "fact and value are logically and epistemologically distinct, and hence that value-free knowledge is possible" (Archer, 1988: 272). Therefore on the basis of 'positive external realism', the quantitative research tradition emphasis is on the empirical study of the relationship among phenomena through the appropriate research design and statistical inference that are considered to be value free.

The qualitative research approach on the other hand is associated with the philosophical standpoint of 'normativism-subjective idealism'. Subjective idealism views reality as the product of the cognition of the individual knowing subject. "The social world external to the individual is nothing more than names, concepts and labels which are used as artificial creations" (Burrell and Morgan, 1979 in Jean, 1992: 89). The individual acts as an active participant in the construction of that world. This view of reality leads to the normativism epistemological viewpoint that knowledge and value cannot be separated and therefore a value-laden knowledge is considered more appropriate. Thus, "those who advocate the superiority of qualitative approaches tend to see rigor as requiring the close and intimate observation that can only be given to a small sample at any time" (Archer, 1988: 274).

#### 2.4.1 **Problems with the Traditional Philosophical Standpoints**

The non-ending debates between the quantitative and qualitative research traditions reveal that 'Positivist' and 'Normativist' views both contain several severe problems as follows:

##### a) *Weaknesses in both Standpoints*

Both standpoints can be criticised from the philosophical aspect and from their application aspect. From the philosophical standpoint, the 'positivism-external realism' viewpoint which calls for maintaining the independence between fact and value and between the reality under study and the researcher has been criticised for ignoring the reflexivity and complexity inherent in social reality since it is constructed by social actors (Archer, 1988 drawing on Knorr-Cetina, 1981; Stanworth and Curran, 1976).

Stanworth and Curran criticise the underlying assumption of the 'positivist' view that natural and social phenomena belong to the same category of entities for purposes of theorising and explanation. They highlight how the fact that social phenomena understand their own behaviour and can act purposefully while the natural phenomena do not have these properties is a crucial difference that needs attention.

The weaknesses of adopting the 'positivist view' in the study of social phenomena have to some extent been documented in the previous discussion. It can be summarised that resulting from the 'positivist' view, the social behavioural study that uses the quantitative approach suffers from the failure to consider part of "the potential explanatory variables, the subjective beliefs, desires and other intentional states related to situations and actions by actors in the research site" (Archer, 1988: 282) *and* to understand the "internal social logic" of a social grouping (Curran and Stanworth, 1976). Tomkins and Groves (1983) emphasise this weakness in terms of the 'schism' between academic and practitioner suggesting that by ignoring the vocabularies and subjective rationality of managers in research sites the researcher may impose a theoretical framework alien to their reasoning (Archer, 1988).

Another weakness of positivism external realism which the author sees as crucial is the element of 'objectivity' imposed by it. Objectivity does not support the use of a conceptual framework because inherent within the construction of the conceptual framework is the researcher's experience based on existing knowledge in the area under study. Nachmias and Nachmias (1992) consider 'inter-subjectivity' as a more appropriate term than objectivity because as they argue, "the criteria for empirical objectivity and the method for verification are products of human mind". The author however feels that the problem is not with the terminology but with the philosophical foundations underpinning it. It is not clear how the problem of 'fragmentation' could be overcome by imposing the 'objectivity element'.

Other weaknesses that may indirectly derive from the positivism external realism standpoint are 'abstract theorising', the 'snap-shot' picture and the search for 'representativeness', as has been discussed in the earlier section.

The 'normativism-subjective idealism' philosophical standpoint on the other hand, can be highlighted for other weaknesses inherent in qualitative research. In rejecting the external realism viewpoint, the subjective idealist adopts the view that social reality and also physical reality are dependent on the perceiving subject (the researcher) in that their primary and secondary qualities are assigned by the perceiving subject (as reflected in Hume's 1748 writing, as in Archer, 1988). From the philosophical aspect, Putnam argues that by accepting subjective idealism, we are unable to vouch for reality of anything beyond our immediate thoughts and sensations (Archer, 1988). The weak stance in philosophical foundation can be blamed for some weaknesses commonly associated with a purely qualitative research approach such as the distinct possibility of researcher bias, the lack of generalisability of findings (Miles and Huberman, 1994), and that what is achieved through purely qualitative research is a bundle of researchers' perceptions and common sense storytelling based on the researcher's own individual cognitive apparatus. These weaknesses are related to the element of 'subjectivity' and 'selectivity' imposed by it.

Normativism-subjective idealism also does not support the need for the conceptual framework or any kind of pre-condition to the production of knowledge and therefore can be associated with the fragmented, ad hoc and brute inductivism weaknesses potentially inherent in the purely qualitative research approach.

b) *Inability to Justify Combining Approaches and the 'Horses for Courses Approach'*

As the result of the weaknesses above and the continuous debates on which research approach is more superior than the other, many authors have tried to seek a solution by a fusion of the two approaches in order to reap their respective benefits and build on respective strengths. However, the philosophical issue seems to pose more problems with regard to the possibility of combining the two approaches. The divergent traditional philosophical standpoints create the methodological 'schism' which deny the possibility that quantitative and qualitative approaches can co-exist since they form two mutually exclusive views of reality and therefore "they are likely to inhibit a compatible view about the way in which social reality ought to be studied" (Bryman, 1988: 107).

Another solution taken by many writers to overcome weaknesses inherent in both qualitative and quantitative approaches is suggesting a 'horses for courses' approach. The choice of the research approach depends on what is referred to by Bryman as 'technical issues' regarding the suitability of a particular approach with the types of problem under investigation. The nature of phenomena and the state of knowledge of the phenomena under study are often used to justify the application of a particular research approach. Walker and Petty (1986: 16), for example, suggests that "certain questions cannot be answered by quantitative methods, while others cannot be answered by qualitative ones". Bygrave's (1989: 12) proposition that "sophisticated tools that are suitable for an advanced paradigm may not be proper for an infant one" is another suggestion of this sort. The arguments for a 'horses for courses' approach make sense but cannot always be accommodated by the traditional philosophical standpoints.

c) *Unclear link between the Philosophical Standpoint and the Research Technique*

Although the qualitative and quantitative research traditions are each associated with distinctive methods of data collection and research strategy, in reality there is 'less precise' distinction between the two than has been emphasised from the philosophical point of view (Bryman, 1988). Gibb (1992) has raised the issue of survey, quantitative research being subjective instead of objective because questionnaires that are designed are actually imposing the researchers values on the study. His argument is very similar to that of Nachmias and Nachmias mentioned earlier. Bryman (1988: 119) argues that "participant observation does not depart radically from positivist epistemology" because of the inspiration for theoretical investigation. He uses the same argument regarding Glaser and Strauss's (1967) grounded theory method. Since according to this method the theory is viewed as the emergent product of an investigation and the theory is being envisioned as something which needs to be tested, the grounded theory can be regarded as retaining positivist elements which does not parallel with their quest for more grounding of qualitative research.

Partly due to the above problems philosophical standpoints are often neglected. To many researchers and authors the choice of the research approach seems to be a matter of 'technical issues' mentioned earlier. Perhaps the technical arguments may be bound up with a set of personal values or beliefs about the reality and knowledge under study but many authors ignore the need to make explicit their philosophical standpoints. What is clear is that the philosophical issue fails to attract many scholars and is thus not accommodated with regard to appropriate foundation on which research approaches are based and thus in terms of due consideration to how knowledge is created.

## 2.5 AN ALTERNATIVE PHILOSOPHICAL STANDPOINT– INTERNAL REALISM

In spite of the low level of attention given by many authors and researchers to the philosophical issue, the author shares Archer's view that "how a piece of research may

best be conducted presupposes philosophical positions (explicitly or not) about the nature of 'knowledge' and 'reality', for presumably any research is intended to study some aspect of reality in order to contribute to 'knowledge' (Archer, 1988: 270). What are seen as problems are the standpoints of 'positivism-external realism' and 'normativism-subjective idealism' which are to be partly blamed for the propounded weaknesses of quantitative and qualitative research respectively and seem not to fit in well with how we think social behavioural research should best be conducted (as argued from the technical point of view).

The author sees a better foundation provided by an alternative philosophical standpoint termed by Putnam 1981 (in Archer, 1988) as 'internal realism' which is derived from Kant 1787 (in Archer) and further developed by Archer. This philosophical standpoint was proposed by Kant in response to weaknesses inherent in the subjective idealism ideology. Sharing the subjective idealism objection to external realism, internal realism holds the view that reality is dependent on the perceiving subject, but according to internal realism reality can be known using the shared human cognitive apparatus, not a cognition of the individual subject as inferred by subjective idealism.

Archer advances 'internal realism' and emphasises that "if objects-in-themselves are considered apart from all their qualities, secondary and primary, then it is the case that we cannot know objects-in-themselves but only what the human cognitive apparatus makes of those objects. However, this does not imply (as argued by Hume) that objects-in-themselves do not exist. Rather, the situation is that human knowledge cannot deal with objects-in-themselves, but only with those objects as apprehended by the human cognitive apparatus. Thus, not only the 'secondary' qualities (for example, colour), but also the 'primary qualities' (spatio-temporal individualisation) which we ascribe to objects, are a function of our shared-cognitive apparatus and cannot be considered as inherent in objects-in-themselves" (Archer, 1988: 275-6).

In line with the ontological viewpoint of 'internal realism', Archer suggests an epistemological viewpoint which is different from the 'positivism' standpoint because fact is not value free, and also different from the 'normativism' standpoint because fact

and value are not indistinguishable but can be disentangled, even though value laden. According to this alternative epistemological viewpoint, “human cognition can discover inter-subjectively validated facts, derived from human sharing of certain characteristic ways of construing reality” (Archer, 1988: 276). Archer refers to this epistemological position as ‘non-positivism’.

Archer draws on Ravetz (1971) and Popper (1968) who point out that scientific knowledge, like other forms of knowledge is socially produced. He argues that Popperian ‘rationality of science’ derives from the collective purpose and values of the scientific community. These writings hence support the ‘internal realism’ philosophical viewpoint.

Archer (1988) summarised the internal realism standpoints as follows:

- (i) Reality is viewed as an inter-subjective construction of the shared human apparatus (internal realism);
- (ii) Facts and values are viewed as being intertwined and hard to disentangle- not indistinguishable- with both fact and value involved in scientific knowledge (non-positivism)

### **2.5.1 The Implications of Internal Realism on the Research Method**

Important general implications of the ‘internal realism’ philosophical standpoint on research method are as follows:

- i) *The requirement for a ‘conceptual framework’ to foothold the research*

The view that human cognition can discover inter-subjectively validated facts through the use of human shared apparatus emphasises the requirement for some kind of ‘conceptual framework’ to foothold the research investigation in terms of raising relevant research questions and guiding the data collection as well as the interpretation

of the findings. The development of the conceptual framework also enables the researcher to be furnished with relevant knowledge; that is, to achieve what is referred to by Archer as the 'pre-knowledge' condition. In addition to this, the inevitable theory and value-laden nature of our observations emphasise the need to clearly spell out underlying values and theories.

The utilisation of a conceptual framework is similar to the 'positive heuristic' element of a research programme whereby researchers are given a fairly coherent idea of what to look for in order to test or develop further the existing theory or understanding. The 'conceptual framework' that is properly developed and the positive heuristic element enable the continuity in knowledge development and thus avoid the possibility that the research is fragmented and ad hoc. The positive heuristic element is being emphasised more in quantitative research techniques and often neglected in qualitative type techniques. However, it can be argued that the use of the conceptual framework in quantitative research does not fit in with the positivism standpoint because as emphasised by Nachmias and Nachmias (1992) the criteria for empirical objectivity and the method of verification are actually the product of the human mind. On the other hand, internal realism makes explicit the need for 'conceptual frameworks' and therefore allows for a design of a method that is capable of overcoming the ad hoc and fragmented weaknesses of research approaches.

- ii) *It accommodates the 'multiple perspective' approach and 'horses for courses' approach*

The internal realism philosophical standpoint recognises that our observations are inevitably theory and value laden and research can be both quantitative and qualitative. This provides the bridge between the two traditional research traditions and thus overcomes the problems associated with the 'positivist' and 'normativist' standpoints mentioned in the earlier section. It thus enables the use of multiple perspective approaches and forms a valid foundation for 'horses for courses' approaches.



iii) *It links the research method to the issue under study*

The 'horses for courses' approach creates the need to link the research method to the nature of the issue (problem and subject) under study. The approach will benefit from the 'technical' issues raised by many writers. It also allows the utilisation of the literature as a guide to the design of a research method that is capable of circumventing much of the methodological and conceptual weaknesses commonly associated with management research.

iv) *It links the research method to the state of knowledge of the area under study*

Since the conceptual framework to foothold the research is derived from the build-up of sub-frameworks of insight from existing levels of knowledge under study, internal realism also creates a link between the state of knowledge of the area under study and the way research in that area should be conducted. In a mature discipline, there is an adequate operationalised theory and acceptable taxonomic categories (Archer, 1988; Bygrave, 1989) and thus the conceptual framework is rather developed; a quantitative research approach can be applied in this context. On the other hand, in a nascent area of study such as small business management, "the explanatory theory is too underdeveloped to suggest anything at all clear and unambiguous in terms of taxonomic categories and concept of relevance" (Archer, 1988: 285), or in other words, it is at its pre-theory stage; application of the quantitative/inductive method would probably result in a pseudo-test of inadequate operationalised theories, the weakness pointed out by Kaplan that could again lead to ad hoc theorising. This relates to Gibson's argument that we might miss the pre-theory and the theory development stage. Archer drawing on Kaplan's argument which is based on Roethlisberger's 'knowledge tree' emphasises that, at this state of knowledge, we are able to achieve only 'clinical knowledge' in contrast to the 'analytical knowledge' capable of achievement in the more advanced disciplines.

Internal realism acknowledges that research in nascent disciplines should not be treated similarly to the research in the more mature disciplines because they are different in

terms of the availability of 'shared human apparatus' and their readiness to be applied. This argument is somewhat similar to the non-philosophical arguments posed by several other authors such as that by Bygrave (1989: 12) who suggested that "sophisticated tools that are suitable for an advanced paradigm may not be proper for an infant one". Even in the natural sciences, the example given by Bygrave on Becquerel's discovery of the origin of nuclear physics which began with the accidental discovery of radioactivity shows that in the early development of the subject scholars are guided more by intuition than by theory and do not follow the scientific approach. Internal realism is in line with this argument and thus provides the philosophical foundation for this technical (state of knowledge) justification which makes it of higher intellectual value.

However the implication of the internal realism philosophical standpoint for the study of a nascent discipline differs much more than the many technical arguments would have suggested. According to internal realism, special treatment should not necessarily involve the use of the qualitative/inductive research method, particularly case study research as suggested by many authors, but more importantly it should be concerned with the process of developing the conceptual framework prior to the actual research.

The requirement for the development of the conceptual framework would by itself overcome the 'brute' empiricism problem inherent in purely inductive research while the use of this framework would produce findings which 'transcend story telling'.

### **2.5.2 The Process of Epistemological Bootstrapping**

The process of constructing a conceptual framework is crucial in a nascent discipline. Archer (1988: 285) propounds what he termed 'the epistemological bootstrap' which constitutes "a proto-interpretative theory which is used to read in data and loads those data with its own assumptions" and is an informal individualistic process during which the proto-theory which is 'the springboard for a research programme' is developed. Epistemological bootstrapping can be regarded as the process of trying to establish

accounts of phenomena that are candidates for factual status to give a good foothold to the research.

For Archer, the epistemological bootstrap forms an initial conceptual framework which could be hazy and tentative but sufficient to set forth initial taxonomic categories (representing discrete events and behaviour) and criteria of relevance. The haziness of the initial framework raises issues for investigation which may lead to findings which can be corroborated and achieve factual status. This method is thus not only capable of circumventing the 'ad hoc' nature of social research but also the criticism raised by Kaplan that too much research (with specific reference to management accounting) is being undertaken by individuals with little familiarity with the phenomena being studied.

Archer emphasises that this process is similar to that proposed by Glaser and Strauss in the grounded theory approach:

...the sociologist may begin the research with a partial framework of local concepts, designating a few principles or gross features of the situation that he will study...these concepts give him the beginning foothold on his research. Of course, he does not know the relevancy of these concepts to his problem- this problem must emerge. (Glaser and Strauss, 1967: 45).

However Glaser and Strauss consider this process as part of the actual research while Archer prefers to treat it as a pre-research process.

Other authors such as Romano (1989: 40) infer the use of an informal process to guide the actual research; "The semi-structured interview was developed as a result of an extensive study which enhanced the design of the questionnaire and contributed significantly to the basic design of the project."

Wyer (1990) taking on board Archer's work on internal realism has modified Archer's epistemological bootstrapping and demonstrated the real application of it. Wyer responds to Archer's view that the epistemological bootstrapping is an informal and individualistic process, prior to the undertaking of research whereby minimal familiarity with the field can be achieved through a combination of studying any extant

literature and personal exposure to the field. Wyer feels that this does not provide “the degree of formalisation necessary to ensure the establishment of a sufficiently solid initial conceptual framework”. According to Wyer, “if the proto-theory is to provide Archer’s ‘epistemological bootstrap’ in the quest to establish facts, then initial formal research may well be essential to consolidate the would-be researcher’s existing knowledge-base with current occurrences and advance in the field to be researched, both in the world of management practice and with academic advance” (p.44). Thus he proposes that the epistemological bootstrapping should form an integral part of the research.

Wyer demonstrates the step by step application of epistemological bootstrapping which can contribute significantly to the study of a nascent discipline. Starting from a ‘loose bootstrap’ built from the researcher’s knowledge base and key literature, issues capable of factual status are raised and assist in the formulating of the research questions, thus helping to focus the attention on the issues relevant to the study within the context of current practical management need and existing academic works. Next these issues are utilised as a basis for discussion with the small business community in order to firm up insights provided by the partial framework and modify the constructs of the researcher. These modified partial frameworks and constructs are taken back to the literature for further analysis. The iterative process between the literature and the world of practice provides the researcher with informed insight. Next, Wyer suggests what he called a ‘tight bootstrap’ which involves the undertaking of a progressive review of the extant literature to derive the conceptual framework which will guide the formulation of more precise research questions to be used in the next stage of the research. The ‘tightening’ process also incorporated analysis of the research methodology literature which aided in formulating the remainder of the research approach in terms of determining the research method appropriate for addressing the revealed research questions (in Wyer’s case, a qualitative case study approach was adopted).

## 2.6 THE RESEARCH APPROACH UNDERPINNING THIS STUDY

The foregoing discussions justify the adoption of the philosophical standpoint of internal realism as the foundation on which the author conducts this study. As a result, all its implications on the research design as discussed in the above section need to be considered.

Firstly, it is necessary to consider the state of existing knowledge in the small business financial management discipline as an initial justification of the ‘epistemological bootstrapping’ process for this study:

The state of knowledge in the small business financial management discipline

There is a tendency among scholars (e.g. Bygrave, (1989), Petty (1991), Gibb (1992), Gibson (1992)) to claim that the small business or entrepreneurship discipline is a nascent or immature discipline. Bygrave elaborated on how entrepreneurship is a nascent and emerging discipline:

Although there are intellectual rumblings about entrepreneurship in the 18<sup>th</sup> century by economists such as Say and Smith, it was not until 1911 that Schumpeter gave us the modern version of entrepreneurship...Although Schumpeter’s classic work was written almost eighty years ago, there was very little systematic research into entrepreneurship until McClelland published his book ‘The Achievement Society’ in 1961.....Unlike Physics, which has been central to intellectual thought for more than two millennia, entrepreneurship has barely begun to be noticed. (Bygrave, 1989: 12).

As for financial management, it is also a nascent discipline. Although writings that bare the Finance title can be traced back almost 100 years, the modern finance that focuses on the managerial side (as opposed to financial capital theory) and decision making only developed in the last 40 years. Moreover, financial management concepts, tools and techniques, although as revealed by Kaplan are designed by the practitioners (the engineers), are in many cases (for example, capital budgeting techniques and ratio analysis) more theoretically than empirically based and more normative than explanative. They represent highly simplified abstractions based on very restrictive assumptions (for example, the wealth maximisation assumption).

It follows that the state of knowledge on small business finance is also immature and emerging, as noted by Petty (1991). Indeed, it is even more immature compared to the traditional financial management discipline since the development of financial management theory and models are based on a large company orientation. Only recently has the small business received some attention from a few finance scholars who have tried to modify some of these tools and techniques to fit in the small business environment.

### **2.6.1 The Research Design**

Considering the under-developed state of knowledge of the small business and management disciplines, a research approach based on Archer's and Wyer's works on epistemological bootstrapping is adopted. In this study, epistemological bootstrapping is regarded as a process which forms the beginning and integral part of the actual research as suggested by Wyer. The research design is thus divided into two stages: (I) the bootstrapping process, also referred to in this study as 'the development of the conceptual framework, to foothold the research' and (II) the 'field research'.

#### **(I) The bootstrapping process**

The initial research stage which is labelled as 'the bootstrapping process' includes the drawing on relevant literature (research insight) and key informants (small-business experts) so as to guide the actual research in the next stage both in terms of raising specific issues and questions to be asked and the method to be utilised.

The author, attempting to adopt Wyer's step by step 'bootstrapping' strategy, is constrained by the distance between the author (the researcher) and the object under study since the author is conducting the research on Malaysian small businesses whilst drawing upon relevant academic and pragmatic insight in the U.K. This calls for some modification of Wyer's bootstrapping strategy.

The epistemological bootstrapping process takes the form of Wyer's 'tight' bootstrap since the 'loose' bootstrapping was undertaken prior to this discussion where general issues for investigation were raised as presented in the problem statement

The bootstrapping process involves the review of literature, both theoretical and empirical, including the Malaysian small business literature. This enabled the author to derive partial sub-frameworks which are integrated into a partial conceptual framework of insight and used to design a draft case study interview instrument. The author has then spent six months in Malaysia during which the first two months involved the initial interface with the small business world of practice (owner-managers, advisors and trainers) and incorporated three pilot case studies to enable the completion of the frameworking and the modification of the guiding interview instrument both in terms of content and wording using the pragmatic insight from the owner-managers.

The bootstrapping process is summarised as follows:

- i) Examination of related 'definitional' literature on financial management to provide insight into the scope and definition of financial management in order to develop an interpretative framework within which to analyse the nature of financial management application in small business.
- ii) Examination of the mainstream financial management literature to develop the sub-framework of traditional financial management concepts, tools and techniques within which to analyse the extent of traditional financial management application in small business.
- iii) Examination of both empirical and theoretical small business literature to present a partial framework of insight of unique characteristics, problem types and idiosyncrasies of the small business as shown by existing insight and understanding.

- iv) Examination of other related literature that has potential to build up insight of small business financial management– the decision-making literature and the strategic management literature.
- v) Development of initial interface with the world of small business practice (owner-managers, advisors and trainers) to firm up on insight revealed in (iii) and (iv).
- vi) Examination of key research methodology literature to reconfirm the author's existing level of understanding regarding pitfalls and weaknesses of small business management research to begin to reveal an appropriate research approach.
- v) Synthesis of all above insights into an integrated 'partial conceptual framework' which then raises the questions to be addressed in the field research and provides the parameters for subsequent consideration of appropriate research approach and design for addressing the revealed research questions.

## **(II) The field research**

The second stage activity, the 'field research' involved data collection and analysis of findings utilising the structured conceptual framework of insight to guide data collection instrument design and analytical framework design. The 'horses for courses' research approach is adopted. That is, the research method adopted in the field research is determined by the questions and issues raised from the conceptual framework. The discussion on the research method is undertaken in Chapter 4, following the chapter on the actual development of the conceptual framework. Further insights from the research methodology literature are also utilised to inform the method chosen so as to circumvent the potential methodological pitfalls discussed earlier.



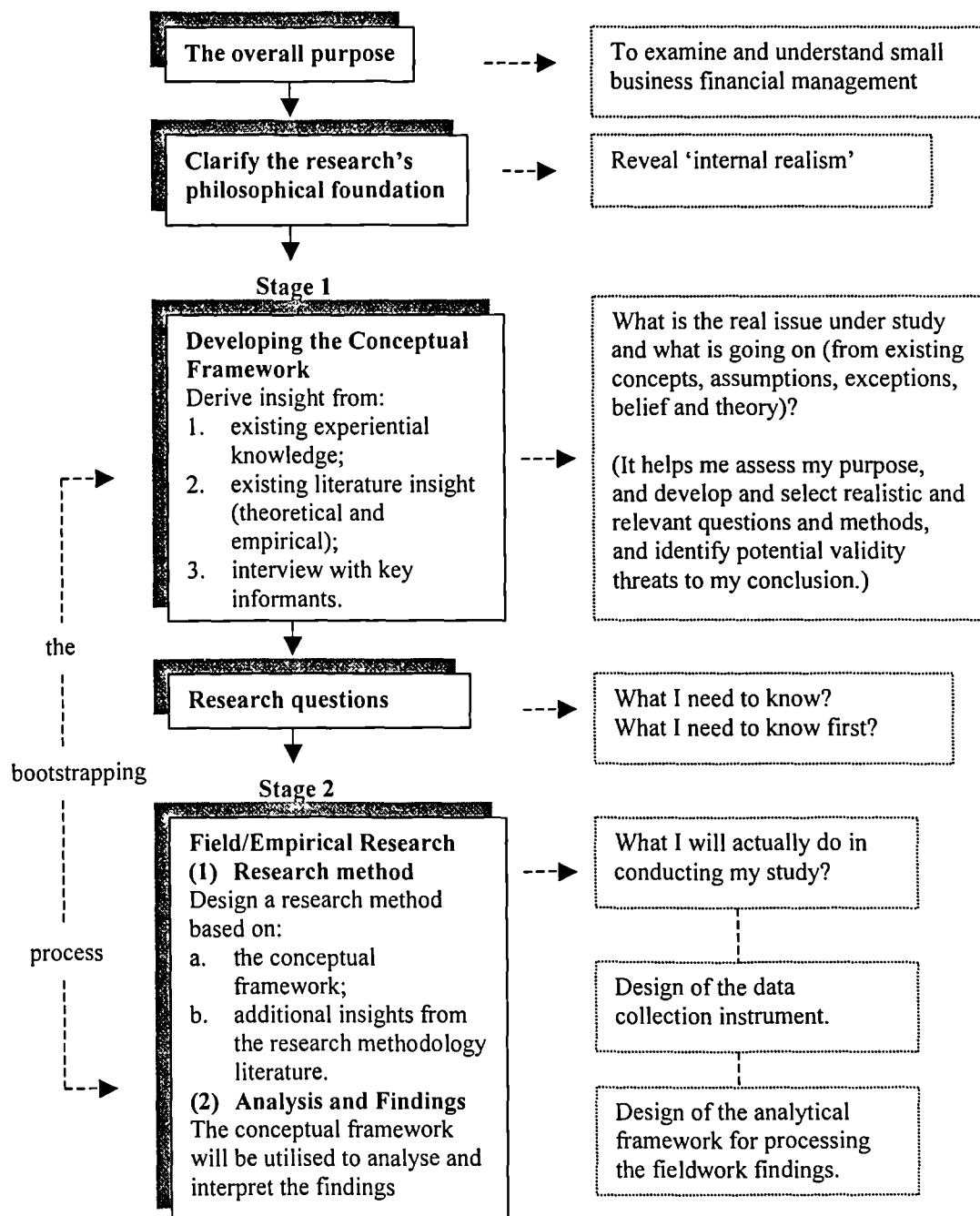
## 2.7 SUMMARY

The research approach to this study is summarised in Figure 1.

Figure 1

### **Approaching the Research Design**

(founded on adaptation of Archer's (1988) bootstrapping process and Maxwell's (1996) guiding framework for research design)



The chapter commences with the reviewing the pitfalls and weaknesses of management research and small business research. It then leads into the discussion on the research philosophical issues. Weaknesses of both ‘positivist realist’ and ‘normativist idealist’, the two prominent research traditions, lead to the rejection of both, and the acceptance of the ontological position of ‘internal realism’ derived from Kant (1787) and developed by Archer (1988). ‘Internal realism’ propounds the inter-subjective construing of reality and the role of fact *and* value in the construction of knowledge.

This philosophical standpoint imposes the requirement for the build-up of partial frameworks of insight from existing levels of knowledge to foothold the research and to clearly spell out underlying values and theories, and thus is capable of overcoming the fragmentation, ad hoc and brute empiricism and ill informed base underpinning much previous research.

Due to the requirement for a conceptual framework to foothold the study, the under-developed nature of the small business financial management discipline justifies the need to build-in a process termed the ‘bootstrapping process’ as a formal and integral part of the research approach for this study. The bootstrapping process, which incorporates insights from the literature and the world of practice, ensures a well-developed conceptual framework. The framework raises relevant questions for the investigation in the next stage of study and guides the analysis of the findings. Adopting the ‘horses for courses’ research approach, the specific method to be utilised in the actual research stage will be designed to suit questions raised *and* it is thus best determined out of the build-up of the conceptual framework.

The next chapter discusses the development of the conceptual framework, that is the bootstrapping process.

# CHAPTER THREE

## CHAPTER THREE

### DEVELOPING CONCEPTUAL SUB-FRAMEWORKS TO FOOTHOLD THE RESEARCH

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#### 3.1 INTRODUCTION

In this section three sub-frameworks will be developed utilising the literature and insight from key informants. The first sub-framework aims to guide the investigation on the nature of financial management practices in small business. It is based on a fresh look at the definition of financial management to identify the scope and parameters of the study. The second sub-framework aims to guide the investigation on the extent of the traditional financial management application. It is based on conceptualising the traditional concepts, tools and techniques. The third sub-framework aims to guide the understanding of the underlying forces that shape small businesses' financial management approaches. It is preceded by positioning financial management in a total context of small business activity and strategic development and thus incorporating the internal and external contextual factors of small business. It will also utilise the 'rational choice' literature and takes into account debates on the practicality of traditional financial management tools and techniques. It is re-emphasised that the development of these frameworks represent the bootstrapping process which forms the beginning and integral parts of the overall research process.

#### 3.2 TOWARDS DEVELOPING THE SUB-FRAMEWORK ON THE NATURE OF FINANCIAL MANAGEMENT APPROACHES

The sub-framework to be developed in this section will raise specific research questions to be investigated in the data collection stage of the study and will guide the description and consideration of the nature of financial management approaches in the analysis part.

This section will commence by reviewing the definitions and descriptions of the financial management discipline as portrayed by the main financial management texts.

It then will lead into the reviewing of other relevant literature in pursuit of developing a suitable, yet acceptable definition of financial management to be adopted in this study.

### **3.2.1 Insight into the Scope and Definition of Financial Management**

Examination of the literature and discussion with small business practitioners underlines that there is some vagueness and confusion on what constitutes financial management. This is reflected not only in the lay-mans use of the term but also among the academic community whereby there are inconsistencies in the scope of discussion of recent literature on the subject. Some of the factors that contribute to the vagueness and confusion are the lack of consensus over the definition of financial management (Puxty and Dodds, 1991), the use of differing titles for textbooks and modules (for example, Managing Finance, Business Finance, Corporate Finance and Financial Decision-Making) with different emphasis and organisation, the confusion with the accounting function and some problems with regard to terminology. It is necessary that this research commences with a well informed base of what financial management is. This will provide the scope and focus of the study and guide the build-up of guiding frameworks for the study. To achieve this, the brief historical development of the subject is presented and several recent mainstream financial management texts are reviewed with special care given to the terminologies used.

#### **Historical Development of Financial Management**

A brief history of the financial management discipline is based on Archer and Ambrosio's (1972) review of classic texts in the related field. During the earliest development, commencing in 1897 when Greene published a first and formal book and proceeding until the 1950s, the primary focus which was referred to as the 'finance' discipline was on the episodic financing of business enterprise. Dewing's 1919 text, *'The Financial Policy of Corporation'* was considered as classic because it established the pattern of finance books for the subsequent thirty years. The text focuses on the major episodes in the life cycle of a business and the implication these episodes hold for the financing of the firm. Further development of his work was conducted by Lyon in

1938 who brings attention to three basic factors 'incidental' to all business firms: risk, income and control (Archer and D'Ambrosio, 1972).

The second major development in the study of financial management shifted the emphasis from the episodic financial events to day-to-day operation of financial management. Although introduced in the early 20th century by several scholars such as Gerstenberg and Lincoln, it was only popular after Hunt and Williams' text, '*Case Problem in Finance*' was published in 1949 (Archer and D'Ambrosio, 1972). This so-called, 'managerial approach' emphasised the viewpoint of the 'insider looking in' as opposed to the traditional viewpoint of the 'outsider looking in'. It also views financial management as a continuous process, not discontinuous decisions as viewed by the traditional approach.

A further development in the study of financial management took place in the 1950's when it began to be considered from an economic viewpoint. Economic theory was applied to the context of financial decision-making which gave rise to new concepts of expected return and cost of capital, as reflected in Joel Dean's (1951) text, '*Capital Budgeting*'.

Archer and D'Ambrosio have since integrated (i) descriptive, episodic finance, (ii) routine, managerial finance, and (iii) the economic aspects of financial decision-making in their text, '*Business Finance: Theory and Management*' (1972). Other subsequent texts have been written by many other authors covering the same scope and content but varying in emphasis between episodic finance and managerial finance, between the excessive utilisation of economic theory and utilisation of accounting theory.

### **Current Scope of Financial Management**

None of the texts reviewed above bares 'Financial Management' in the title. Financial management may be viewed as the evolution of the old 'finance' discipline or a branch of the modern 'finance' discipline. What then constitutes 'financial management' has to be based on the more recent texts.

Broad definitions of financial management can be traced, such as “the management of the financial aspects of the enterprise” (Puxty and Dodds, 1991: 4) and “a task of managing financial resources” (Samuel et al., 1990). Such definitions may imply that financial management encompasses everything that has to do with money or everything with financial implications. These broad definitions are likely to blur the difference between financial management and accounting as is reflected in some of the literature (see McMahon and Holmes, 1991) whereby the scope of discussion on financial management includes financial reporting and record keeping. Many authors, including Puxty and Dodds, realising this possible confusion, have clarified that accounting is concerned with the processing and interpretation of information to those within the firm or those outside it.

Thus, financial management involves a more specific task than merely managing financial capital. The majority of description on the subject portrays the financial management function as being concerned with making investment and financing decisions. Puxty and Dodds later in their discussion summarise that financial management functions “can be conveniently divided into two parts: that concerned with the acquisition of finance and that concerned with its allocation” (p.9). Brealey and Myers (1995), in the introductory sections of their text, *‘The Fundamental of Corporate Finance’*, state that the book is about financial decisions by corporations”. They then continue to emphasise that what they mean by financial decisions are decisions with respect to investing and financing. The same description can be extracted from Van Horne and Wachowicz (1995), Brigham (1995), Lumby (1994) and many others.

The description of financial management as an area concerned with investment and financing decision-making is still vague. It does not spell out the difference between the act of financial management and other forms of investment and financing decision-making. Keown et al. (1994) have proposed a more specific definition of financial management as "decision-making with an eye to creating wealth". By incorporating the normative goal of wealth creation, it represents a more accurate definition of what financial management is as appears in the mainstream financial management literature. Even though the majority of the available definitions do not incorporate the wealth

creation goal, the goal is explicitly mentioned at the very beginning of most financial management texts. The maximisation of the wealth motive is in fact the heart of financial management that differentiates it from any other act of decision-making and from the traditional accounting model of maximising profit. The concern in 'wealth' or 'value' gives rise to the concepts of risk, cash flow and time as important financial management concepts (McMahon and Stanger, 1995).

However, the utilisation of this definition would ignore financial decision-making that relates to 'financial motives' other than maximising wealth, with these not being considered an act of financial management. Furthermore, empirical evidence on small business objective functions show that small businesses are pursuing a wide variety of motives other than growth and wealth maximisation (see McMahon and Stanger, 1995; LeCornu et al., 1996) *and*, arguably financial decision-making is crucial in these firms because, if they want to continuously exist or survive, they must take decisions that would at least maintain their existing level of wealth. Firms must continue to invest simply to replace worn out or obsolete capital and in some circumstances the life cycle of the product would demand changes in product strategy in which the firms will have to do more than replace capital in order to survive (Puxty and Dodds, 1991). This argument shows the importance of making the 'right' investment and financing decisions in any type of firm and hence that they should be guided by some forms of financial management. The definition by Keown et al. does not cater for this kind of financial management but does represent an acceptable definition of what is referred to in this study as the 'traditional financial management'.

The description of financial management being concerned with making investment and financing decisions clarifies the confusion between accounting and financial management functions in that it clarifies Sheridan's (1996) view that financial management takes on a function of a 'coach', not a 'scorekeeper'. It excludes the accounting function of reporting and generating information but treats them as tools for aiding decision making.



By emphasising only on the financing and investment decision, the definition excludes pricing decision-making, which is an area of concern in the accountancy discipline.

However the position of financial planning and monitoring is not so clear-cut because whilst this definition seems to exclude them, the literature that suggest the definition portrays them as part of the main functions (see Puxty and Dodds, 1991; Van Horne and Wachowicz, 1995).

### **3.2.2 The Focus on Financial Decision**

No doubt further review of the literature may reveal other definitions of financial management with a wide ranging scope of activity. However the majority would agree that its main tasks are investment and financing decision-making. This forms the basis for the focus on investment and financing decision-making in the study of financial management practices of an organisation. Financial planning and monitoring will be treated as some of the tools (through the implementation of financial planning and financial monitoring, a decision-maker becomes aware of the need to make certain decisions for example to change or not change the current credit policy or to increase or decrease capital investment).

Investment and financing decisions are referred to in this study as 'financial decisions'. This study thus defines the term 'financial decision' as encompassing only these two types of decision. The definition is necessary since in the existing usage of the term it has been taken to represent a diversity of meaning such as that which is restricted to only decisions to raise finance and that which is too broad to include all decisions with financial implications. The definition of financial decision adopted here is in line with its usage in most financial management literature (for example, Lumby, 1994).

With reference to the financial management literature, financial decisions are categorised into three types of decision:

- the fixed investment decision
- the long-term financing decision

- the working capital decision

The fixed investment decision, also widely known as the capital budgeting decision can be defined as the decision to do with anything which involves committing resources in the present to receive benefit in the future. This definition highlights the motive of receiving benefit from the act of investing but does not specify clearly whether it should be concerned only with decisions that aim for tangible benefit or include others such as the decision to buy a new building for the sake of portraying a good image. It can be argued that, since a firm is built on its total assets, financial management should be concerned with all types of capital spending. This opinion is in line with the term 'allocation of funds' used by Puxty and Dodds (1991) as mentioned in the foregoing discussion. Two characteristics of capital investments noted by McLaney (1991) are: 1) the involvement of a large amount of expenditure or cash outlay at the inception of the investment; and (2) a long period of time (more than one year) of recovering the return and committing resources.

The long-term financing decision will include all decisions pertaining to the use of medium and long term financing. One particular decision that has been receiving special attention in the financial management literature is concerned with deciding on the 'best' mix of long-term financing to be employed in a business (Van Horne and Wachowicz, 1995; Lumby, 1994). Other decisions may involve determining whether outside funds should be raised, the amount to raise and in what form (Puxty and Dodds, 1991). This will incorporate also the decision on the amount of dividend to be distributed since earnings that are not released as dividends can be used as a source of financing.

The working capital decision is the decision related to the level of investment in various types of current assets and the level of short-term financing. Some examples of this decision are decisions whether to put some money in certificate deposit or not, decisions whether to choose a credit period, of say, 30 days or 60 days and decisions whether to increase the overdraft limit or not. They are separated from the capital

investment and financing decision because of “the tendency for them to be short-term, reversible at relatively short notice and made more frequently” (McLaney, 1991: 268).

### **Insight into the Decision-Making Process**

Insight from the decision-making literature is bootstrapped to further assist in building the overall conceptual framework. The huge amount of literature regards decision-making as a process that is concerned with the whole range of activities involved in making a decision, not merely the point of decision. The traditional, prescriptive literature suggests that decision-making should follow a stage by stage process, but there is some disagreement among writers on what the stages are (Gore et al., 1992). The differences, however, may be due to the variation in the writers’ opinions on what stages should be mentioned explicitly. Mintzberg’s (in Gore et al., 1992) decision-making process, as an example, consists of ‘the need for a decision’, ‘the problem definition’, ‘information gathering’, ‘diagnosis’, ‘evaluation of alternatives’ and ‘choice’. Gore et al. (1992) analyse Mintzberg’s and other writers’ decision-making processes and suggest a process consisting of (1) objective setting, (2) ‘need for a decision, (3) problem definition, (4) search for alternatives, (5) evaluate (6) choice and, (7) implement.

Little discussion on the decision-making process is undertaken in the majority of the financial management texts (for example, Brealey and Myers, 1995 and Van Horne and Wachowicz, 1995). Puxty and Dodds (1991), Lumby (1994), McLaney (1991) and Neale and Pikes (1992) are among few writers who emphasise on placing financial management in the context of decision-making processes.

For Puxty and Dodds and McLaney, the first step in any decision-making process is ‘identifying the problem and setting up the objective’. Decisions are only necessary if there is a gap between what is desired and what is actually achieved. Thus, feedback in the form of financial monitoring represents one of the important tools in this stage. The second stage is the ‘search for alternative courses of action’ followed by the ‘assembling of data relevant’ to the decision. McLaney stresses the importance of recognising the relevant information in the light of the objective specified. Next is the

‘assessing the data’ stage which involves “comparing the option by using the data in such a way as to identify those courses of action which would best work towards the achievement of the objectives” (McLaney, 1991: 14). Lumby (1994) argues that rationally a decision-maker will be unwilling to take a decision unless he expects the decision to be better than other alternatives in terms of achieving the objective. This gives rise to the importance of evaluation criteria and techniques for comparing alternative courses of action. The final stage in McLaney’s financial decision-making process is the ‘monitoring’ stage in which the effect of the decisions are closely monitored so as to ensure the objective is met, so as to limit the bad effect of a poor decision and to improve the quality of future decision.

The concept of ‘rationality’ portrayed in Lumby’s argument plays an important role in decision-making and should be linked to financial management. Rationality in general is used to describe the decision’s relationship to the decision-maker’s objectives (Gore et al., 1992). Financial management can be seen as the means to achieving the rationality, provided the objectives are economically or financially based.

### **3.2.3 Conceptualising the Nature of Financial Management Approaches**

The insight from both the decision-making literature and the financial management literature infer that traditional financial management as defined by Keown et. al contributes to financial decision-making processes by specifying the objective and prescribing the criterion, concepts, tools and techniques for assessing or evaluating alternative actions so as to achieve this objective. It follows that the ‘objective setting’ stage and the ‘the evaluation’ stage are where some form of financial management is applied and thus should be the focus in any investigation pertaining to financial management.

However, realising that the above ‘stage-by-stage’ decision-making process may not hold in practice, there is here no intention to search for the stages. Instead, the study will focus on the whole activities in the process of undertaking a particular financial action as suggested by Neale and Pike (1992), but with the intention to identify

financial objectives, motives, concepts, criterion, tools and/or techniques that were utilised to justify the 'desirability' of alternative actions or influence the undertaking of financial actions. The nature of financial management in small business would be described and analysed based upon the nature of these variables identified from investigations on the small businesses' financial decision-making processes.

Utilisation of traditional financial management can be concluded if the objectives, criterion, tools and technique conform to the traditional financial management framework, as discussed and developed in the next section.

The existence of other motives and criteria, financial or non-financial, besides those prescribed will not be disregarded but rather will be explored as this may lead to identification of either a different form of financial management or non-financial factors that rule-out financial management in financial decision-making.

The definition of financial management as 'the utilisation of financial criterion and/or financial tools and/or financial techniques to guide financial decision-making' is tentatively adopted.

Financial criterion is defined in this study as any financial orientated justification or characteristic or factor or concept by which the desirability or viability of the alternative actions in the decision-making incident is judged.

Financial tool is defined in this study as the calculation for measuring financial criteria. For many financial criteria, the same term is used to refer to the tool that measures it; for example, the NPV refers to a criterion and also to the tool that measures it. There is a possibility that in a particular decision-making incident, no financial tool is used to measure a particular financial criterion such as long-term profitability but gut feel is used instead. This justifies the need to differentiate between financial criteria and financial tools.

Financial technique is defined by the author as the technique of utilising financial criterion to guide the decision-making. There is a possibility that two firms may use the same criterion but the technique of utilising it is different. The differentiation between tool and technique will hopefully allow the identification of this possibility.

Having conceptualised what is referred to as financial management in this study, the description of the nature of financial management approach practised would include the description of the financial motive, the relevant financial criteria, the tools utilised to measure them and technique that utilised them to guide the choice of financial action.

This definition of financial management forms the platform for the focus on financial decision-making processes in the study of financial management practices. The ‘how’, ‘why’ and ‘what’ of these decisions guides the exploration of the form of financial management in an organisation.

The derivation of the sub-framework from the rational analytical model of decision-making does not imply that the author agrees with any of the models that describe the decision-making process as following the stage by stage process. But, the author does agree to the point that financial management should be concerned with rational decision-making- in other words, making the decision with the intention of achieving certain financial objectives by evaluating beforehand the possible consequences of the action.

### **3.3      TOWARDS DEVELOPING THE SUB-FRAMEWORK ON TRADITIONAL FINANCIAL MANAGEMENT APPLICATION**

Traditional financial management in this study refers to the theoretically based financial management as described in the mainstream financial management literature. The term is used to differentiate it from other forms of financial management approach that may emerge from the study.

Deriving from the discussion in section 3.2.1, traditional financial management is defined as ‘financial decision-making with a view to creating wealth’. Although the subject matter can be expressed in terms of the balance sheet items, the analysis of financial decisions has shifted away from accounting concepts towards a thorough grounding in economic theory.

In this section, several financial management texts are reviewed to derive a set of traditional financial management concepts, tools and techniques. The literature is complemented with recent management accounting literature considering its recent increase in emphasis on the financial decision-making function. The author, however, being selective so as not to include concepts, tools and techniques that are clearly impractical and unsuitable to the small business in the final framework. Each of the concepts, tools and techniques is conceptualised to enable their presence or absence to be identified within the small businesses under study.

### **3.3.1 Traditional Financial Management Concepts**

Concepts that emerge from the traditional financial management literature are termed in this study as traditional financial management concepts. They represent important principles or pillars underpinning the traditional theory, tools and techniques. Notwithstanding their relevancy, review of the literature reflects the lack of emphasis and some ‘uncertainty’ on what these concepts are. Allen (1995: 24) in the following assertion admits this fact:

Not so many people seem to be familiar with financial management concepts-partly, perhaps, because less effort has been put into documenting them. Nevertheless, they are important-and the difference, versus the accounting model, need to be understood.

The situation is even worse in small business financial management texts and guides where most of them contain only tools and techniques without much depth of discussion on the underlying concepts. Similarly, most studies on financial management also neglect the study of these concepts.

The author's experience of several years teaching financial management courses together with the review of the literature produce the following conceptualisation as traditional financial management concepts:

### **Wealth or value**

Wealth is the most important concept in traditional financial management since it is regarded as the only rational motive in financial decision making. It is derived from economic theory of utility with the assumption that any individual or firm would prefer to be richer rather than poorer, prefer more wealth to less wealth and thus the level of utility increases with the level of wealth, assuming other factors remain the same (Archer and D'Ambrosio, 1972).

Finance scholars have agreed that the total wealth of all the shareholders in a firm is equal to or represented by the value of the firm. The term 'wealth' and 'value' are thus used interchangeably in the literature. The value of a firm at any one point in time depends on the worth of its capital and current income. The worth of its capital depends on its potential incomes in the future and thus value or wealth of a firm is 'technically' defined in the financial management literature as the present value of future and current incomes (Archer and D'Ambrosio, 1972; Allen, 1997).

Maximising the owners' wealth or maximising the value of the firm is placed by the mainstream financial management literature as the normative goal of financial management. While some objectives emphasise only on the return or growth dimension but neglect the risk dimension (for example, maximising profit and maximising return on capital), some on the contrary emphasise only on the risk, stability, or survival dimensions but neglect the return dimension (for example, survival and long-term stability) and some objectives appear to be short-term in orientation (e.g. maximising the profit), the maximisation of wealth objectives takes account of all, the return, the risk and the long term dimensions of the implication of a decision on a firm (McLaney, 1991; Puxty and Dodds, 1992; Brealey and Myers, 1995).



Maximisation of wealth is clearly important to large listed firms because the failure to maximise shareholders' wealth will eventually result in the shareholders withdrawing money from the firms to invest in others that provide higher increase in wealth. Furthermore, given the diversity of motives among the large number of shareholders, the most rational goal that would satisfy everybody is maximisation of the shareholders wealth.

The wealth maximisation objective is argued by McLaney as not necessarily as much in conflict with the 'satisficing' objective, an objective forwarded by Cyert and March (1963) that seeks to give all stakeholders (instead of any particular stakeholder) a satisfactory return for their inputs. This is because, wealth maximisation might best be promoted by other stakeholders receiving satisfactory return. Therefore, in spite of the controversial debates on the relevancy of traditional financial management in practice, finance scholars (for example, Myers (1987), Petty and Bygrave (1993), Romano et al. (1988) and Allen (1997)) urge and emphasise the need to think of 'value' instead of 'accounting return' in making financial decisions.

The traditional financial management literature, however, does not denote wealth as one of the financial management concepts. Wealth or value is seen as an overriding guiding framework. The relative complexity of the concept also justified the author's attempt to exclude wealth as the concept under study.

The technical definition of wealth as 'the present value of current and future incomes' is built on three important financial management concepts: cash flow, time and risk. Thus for Petty and Bygrave (1993: 126), "the essence of finance, as perceived by academia, deals with the allocation of cash, risk and time among the various claimants of the firm's cash flows".

### **Cash flow**

Cash flow refers to the amount of money actually received (inflow) or released (outflow). This is in contrast with the accounting income, profit and expenses which are

shown when they are earned rather than when the money is actually in hand (Brigham, 1995). According to Sheridan (1996), there can be no more absolute reality than cash.

Cash flow is regarded as an important concept in financial management since it reflects both the exact amount of cash and the exact timing of cash, two of the main inputs in measuring wealth or value. In relation to this, Petty et al. (1993) argue that cash inflows are the ones that can be reinvested and cash outflows are the ones that involve paying out money. The importance of cash flow in financial management is reflected in the 'cash is king' theme highlighted in many financial management writings (for example, Keown et al. (1994) and Sheridan (1996)).

It thus follows that, from the traditional financial management perspective, among the relevant information that decision makers should be concerned with is the cash flow, not the accounting profit, and the tools that are considered superior are those that utilise cash-flows calculation.

### **Time and Time Value of Money**

Most financial decisions involve benefits or costs that are expected to occur over some future finite period and thereby place 'time' as a dimension in traditional financial management (McMahon and Stanger, 1995; Keown et al., 1994; Brealey and Myers, 1995; Brigham, 1995; Allen, 1995). Traditional financial management acknowledges that a sum of money received earlier is worth more than an equivalent sum of money received sometime later because of opportunity to employ today's money in such a way as to receive, not equal, but greater amounts in the future (Archer and D'Ambrosio, 1972). The return that can be received from potential investment is referred to as the opportunity cost. In addition to the opportunity cost, the existence of risk propounds the importance of the 'time value of money' concept.

The timing of cash flows is incorporated in the wealth or value calculation via the concept known as the 'time value of money'. Techniques such as present value, future value and net present value are developed to operationalise this concept. It should be

realised that this concept and its associated tools are more relevant in evaluating long-term decision-making such as investment decision- and financing decision-making since the greater the gap in time between cash flows the more pronounced the time effect on the cash amount. From the traditional financial management perspective, techniques which take into account the time value of money are considered as superior tools. According to Keown et al. (1994), this concept is 'one of the most appealing concepts in finance'.

## **Risk**

As nothing in the future can be certain, all financial decisions are made under conditions of uncertainty and risk and financial decisions also vary in terms of the amount of risk and uncertainty inherent within them. Simon's (1967, in Gore et al., 1992) economic concept of risk differentiates risk and uncertainty; uncertainty refers to the variation of outcomes in which probabilities of their happening are not known while risk refers to the variation of outcomes in which probabilities of distribution are known.

According to the financial management theory, the degree of risk and uncertainty inherent within a financial action is an important parameter to be considered in financial decision-making (Keown et al. 1994; Brigham, 1995). A crucial consideration of risk and uncertainty from this traditional point of view is in the calculation of 'wealth' or 'value' whereby the degree of risk is incorporated in 'the discount rate' or 'the required rate of return' to be used in the calculation.

There are at least two aspects of risk viewed as important in traditional financial management. First, is the risk of the firm itself, for it is used by 'outsiders' (suppliers of capital) and 'insiders' (the management) to measure the riskiness and value of the firm (Archer and D'Ambrosio, 1972). Several types of risk in this form are emphasised in the literature as 'financial risk', 'business risk' and 'liquidity risk'. Financial risk refers to the risk which is the direct implication of the firm's financing decision (Brigham, 1995). It results in additional variability in shareholders earnings and additional change of insolvency due to not being able to fulfil the fixed financing cost (Keown et al,

1994). Business risk refers to relative dispersion in the firm's expected EBIT and is a direct implication of the firm investment activity. Liquidity risk refers to the risk of not fulfilling current obligations.

A second notion of risk is the risk of a specific investment project, reflected in the variation of its potential outcome. The traditional financial management literature classifies this notion of risk into systematic risk (or market risk) and non-systematic risk (or unique risk) because according to financial management theory, attention would only be given to systematic risk in the evaluation of a project since this is the only risk that cannot be reduced by diversification and thus should be compensated for. This derives from the traditional financial management assumption that companies hold a well-diversified portfolio of investment and thus the company will not benefit by attempting to spread its risk by diversification (Brigham, 1995; Brealey and Myers, 1995)

In addition to the basic concepts of cash flows, time and risk, the following can also be regarded as fundamental financial management concepts for they either support the basic concepts or are derived from the basic concepts.

### **Risk-return trade-off**

From the traditional financial management viewpoint, rational decision-makers are assumed to be risk-averse or dislike risk (Keown et al., 1994; Brigham, 1995; Brealey and Myers; 1995). The implication is that investors will only be willing to take additional risk if they can be expected to receive additional reward for doing so. A simple illustration that makes sense is that a decision to venture into a business must be accompanied by an expectation that the return is higher than the return provided by saving the money in the bank. Assuming this applies to any investors as well as spenders, they would all have to forgo return if lower risk decisions are taken and similarly have to take additional risk if they want a higher return (Archer and D'Ambrosio, 1972).

Hence, this so-called 'risk and return trade-off' requires decision-makers to analyse whether the expected return is worth the risk involved (Keown et al., 1994; Brigham, 1995). The 'risk-return trade-off' concept is important in all types of financial decision but varies in the nature of risk and return faced by the decision-maker. In investment decision-making, the concept prescribes that a decision-maker should weight between the additional rate of return and the additional amount of risk involved. In financing decision-making, the concept prescribes that a decision-maker should weight between the degree of financial risk involved and the cost of the various types of financing. The increased use of debt, for example, has a cost in terms of extra risk for shareholders, which offsets the fact that the interest rate is below the overall cost of funds of the company. In a credit decision, a decision-maker should consider the trade-off between the insolvency/liquidity risk and the benefit in terms of sales increase of various types of credit policy.

### **Cost of capital**

The cost of capital concept is closely related to the time value of money concept because the cost of capital is one factor that gives importance to the time value of money. The cost of capital can be simply defined as the cost for using the fund. It can either be represented by the cost charged for the use of the fund or the opportunity foregone by having the fund tied up with something. Theoretically, the cost should include also the implicit cost in terms of the financing activity's implication on firm's risk. Myers (1987: 6) thus defines the cost of capital as the "equilibrium expected rate of return on securities equivalent in risk to the project being valued"

#### **3.3.2 Traditional Financial Management Tools and Techniques**

Tools and techniques in the traditional financial management literature are developed to assist in the evaluation stage of financial decision-making processes. Some of them are simple basic techniques while some are more complex. The more complex tools and techniques take into consideration the concepts of cash flows, time and risk so that they represent good measures of the financial decision's implication on owner's wealth (as in the NPV technique). As for short-term decisions, the 'time' dimension becomes

unimportant but the complexity of the tools and techniques is reflected in the detailed consideration of all possible implications on the cost, benefit and risk. A brief discussion on the traditional financial management tools and techniques will be undertaken in association with each type of financial decision.

**(a) Tools and Techniques for Capital Investment Decision-Making**

Four techniques for capital investment decision which are universally described in the financial management texts are (1) the payback period, (2) the net present value (NPV), (3) the internal rate of return (IRR) and (4) the average rate of return (AROR).

The payback period refers to the time taken for the investment to generate sufficient cash flow to recover the initial outlay (IO).

NPV is the difference between the present value of cash inflows and the IO. It is interpreted as the amount of wealth contributed by the investment.

IRR is the discount rate that equates the present value of cash inflow to the IO. It is interpreted as the compounded rate of return of the investment.

AROR is the average accounting profit as the percentage of the investment cost. However, there are several versions of the AROR equation which vary in terms of the measure of investment cost. The most widely suggested equation is the one that uses the average investment cost, calculated as  $(IO + \text{Salvage}) / 2$ , as the denominator.

The relative merit of the NPV and IRR, both referred to as 'discounted cash flow' (DCF) techniques, have been well documented in financial management literature (for example, Petty et. al, 1993; Brigham, 1995; Lumby, 1994) because they incorporate the amount, the timing and the riskiness of cash flows in their calculation. Between the two, NPV is theoretically the best technique because it actually measures the amount of increment in value or wealth expected to be contributed from the decisions evaluated. NPV technique simply rules that an investment should be undertaken only if the value

today of the stream of cash flows generated by the investment exceed its cost because only in this circumstance will the asset add value or wealth to the firm. It would not be wrong to label the NPV technique as the normative traditional capital budgeting technique. AROR on the other hand, can be considered as the weakest capital budgeting technique from the traditional financial management perspective because it is not based on any of the traditional financial management concepts mentioned earlier. Its merits lie in the 'accounting profit' concept being more familiar or more important to some businesses.

The cash flow calculation is a vital input in the payback, NPV and IRR techniques *and* hence in traditional financial management. Traditional financial management thus prescribes the methods for its calculation. There is, however, the tendency among researchers in this area to examine the implementation of these techniques without paying attention to the way the cash flows are determined. The result of such studies are thus inconclusive and invalid.

The calculation of cash flows is not as straight forward as may be expected. Not all cash flows are relevant to analysing decision-making and some cash flows are not easily identified. The literature stresses that the relevant cash flows in decisionmaking are incremental after-tax cash flows. The basic principle is that, a decisionmaker should take the difference between all the cash flows expected to occur if a particular decision is taken and all the cash flows expected to occur if the decision is not taken. It is only what changes that count (Brigham, 1995). Noncash expenses (for example, depreciation) and incomes should not be included but their tax implications, if any, should be considered. Among other sources of relevant cash flows are (i) the cash flow diverted from existing products, (ii) the increase in working capital requirement and (iii) the opportunity cost, such as the possible income from the unused labour or space. Financing cost is excluded to avoid double counting the effect of financing action (Brigham, 1995). The effect of financing is dealt with in the Discounted Cash Flow (DCF) techniques via the discounting process whereby future cash flows are reduced to take account of the time that finance will be tied up and the relevant interest rate

(McLaney, 1991). The general framework for calculating the cash flows for investment decision-making is given in most texts.

The discount rate is another important input to the discounted cash flow techniques. The traditional financial management prescribes several ways to determine the discount rate. The cost of capital is one way of determining the discount rate but only in the circumstance where the degree of risk of the project evaluated is similar to the degree of the firm's portfolio of investment. The traditional financial management prescribes the Capital Asset Pricing Model (CAPM) approach and the 'risk-adjusted discounted' rate approach to be used in other situations.

Apart from the above four techniques that are commonly discussed in traditional financial management texts, the following are modified versions of these techniques prescribed in recent writings to remedy the main weaknesses of the original versions of the techniques.

- Discounted payback period – According to this technique, payback period is calculated using the discounted cash flows in order to incorporate the time value of money concept.
- Adjusted present value technique (APV) – This technique is developed to overcome the weakness of using 'Weighted Average Cost of Capital' (WACC) as the discount rate in the NPV technique. This technique is argued as being a better technique because it is "versatile", "reliable", "much simpler" and "requires fewer assumptions" (Luehrman, 1996).
- Residual net present value – This technique calculates the NPV based on the after tax cash flow net of financing outlay on all forms of financing except equity and the discount rate equivalent to the required rate of return of equity holder (McMahon, 1993). The advantage of this technique lies in the technique being more straightforward and understandable to the user compared to the traditional NPV technique, which uses the 'unlevered' cash flow and WACC.



The technique of incorporating risk into investment decision-making is another emphasis of traditional financial management. Two techniques are suggested: the certainty equivalent technique and the modified rate of return technique. The former replaces the risky cash flows with the risk-free cash flows by multiplying the risky cash flow with a certainty equivalent factor, followed by discounting these risk-free cash flows at the risk-free discount rate. The latter incorporates risk by making adjustment to the discount rate. Both methods make the adjustment based on an evaluation of the risk relevant to the decision-maker, derived from either (i) a probabilistic risk analysis technique, such as sensitivity analysis, basic probability analysis, decision-trees and simulation or (ii) simple risk adjustment method based on deterministic estimations and intuitive adjustment (Ho and Pike, 1991).

#### **(b) Tools and Techniques for Financing Decision-Making**

Even though financing decision-making issues have been studied for over three decades (Keown et al, 1994), it is an area which remains unresolved in the sense that the literature is unable to prescribe a definite formula that would lead to an optimal decision. This is due to the trade-off between risk and return, *and* the existence of unquantifiable financial-related factors such as the asymmetry of information, the agency cost, the loss of control and the bankruptcy risk. What is available from the literature is a set of concepts identified as being important in financing decision-making because of their possible influence on firms' value or wealth and formulas to quantify these concepts.

Two of these concepts which can be regarded as the major traditional financial management concepts in financing decision-making because of their significant influence on shareholders wealth are the 'cost of capital' and the 'financial risk'. Cost of capital refers to the rate that must be earned in order to satisfy the required rate of return of the firm's investors. The concept is closely related to the discounted cash flows valuation techniques. Some traditional financial management tools for measuring the cost of capital are the 'cost of debt', 'cost of equity' and 'weighted average cost of

capital' (WACC). The importance allocated by traditional financial management to 'financial risk' derived from the fact that an increased utilisation of debt-type financing will result in the increase in the level of uncertainty associated with the cash flows to the shareholders because a greater proportion of the firm's cash flows are pre-empted due to higher fixed payment of interest. Several tools are prescribed to measure the financial risk including the 'degree of financial leverage' (DFL) and the 'debt ratio'.

In determining the optimal capital structure, a tool known as 'EBIT-EPS analysis' is prescribed to enable decision-makers to inspect the impact of alternative financing plans on earnings-per-share (EPS) over a full range of earnings before interest and tax (EBIT) levels (Petty et al., 1993; Brigham, 1995). What this method implies is that if the firm expects its earnings before interest and tax (EBIT) to be above a certain level, known as the 'indifference point' the firm will gain higher EPS if it chooses debt financing compared to equity financing. A formula is thus given for the calculation of the 'indifference point'. However, the EBIT-EPS analysis (or the indifference point) does not necessarily lead to an optimal financing decision because it only considers the implication of the decision on the return element while ignoring the decision's implication on the firm's risk. According to the traditional financial management, financing decision-making should also consider the increase in financial risk resulting from the use of borrowing because a greater proportion of firm cash flows are pre-empted for the higher fixed payment of interest.

Another technique prescribed by traditional financial management is the net advantage of leasing technique (NAL). Its specific usage is in guiding the choice between borrowing and leasing alternatives in financing a fixed asset.

In addition to the above tools, financial management theory also identifies agency cost, transaction cost and corporate and personal taxes as important variables to be considered in financing decision-making for they can influent either the amount of cash flows or the cost of capital and thus on the firms' value (Petty et al., 1993)

Table 1 summarises the scope of traditional financial management concepts, tools and techniques incorporated in this study.

Table 1

**Traditional financial management concepts, tools and techniques**

<b>Decision type</b>	<b>tools and technique</b>	<b>Concept</b>
Capital investment decision	NPV, IRR, payback period, AROR, discounted payback, CAPM, APV, residual NPV, certainty equivalent, adjusted discount rate	wealth, risk, cash flows, opportunity cost, cost of capital, TVOM
Financing decision	leverage analysis, EBIT-EPS analysis, effective cost, matching principle, ratio analysis	financial risk, cash flows, cost of capital, agency cost, taxes, transaction cost

The extent of traditional financial management application in small business will be established by assessing the extent to which the above concepts, tools and techniques are utilised in guiding or rationalising small business financial decision-making.

The above conceptualisation of traditional financial management is derived based on the mainstream financial management literature in order to overcome any misleading or distorted interpretation and analysis, mostly derived out of confusion between the financial management discipline and the accounting discipline. An indication of such confusion is reflected in statements such as this:

In the subject of financial management, the teaching of this strategy becomes, in essence, the inculcation of a rigid line of thought. First, students are told that they must be in business to make a profit. It follows that their business strategies must be formulated on the basis of a profit objective. Third, as it is cheaper in theory to finance a company through debt than through equity, they can maximise their firm's profit by adopting a financing strategy of high leverage through borrowing. (Kao, 1997: 34)

This assertion clearly portrays a distorted picture of the true nature of traditional financial management as it appears in the literature. The ‘bootstrapping process’, thus, enables the circumventing of the conceptual weaknesses of this sort.

### **3.4      Toward Developing the Framework on Understanding Financial Decision Making in Small Business**

A sub-framework will be developed to help understand the factors that influence the nature of financial management approaches adopted in small business which at the same time helps explain the utilisation or non-utilisation of traditional financial management concepts, tools and techniques within small businesses.

The development of the framework commences by placing financial decision-making processes within the total context of small business activity.

#### **3.4.1    The Systems View**

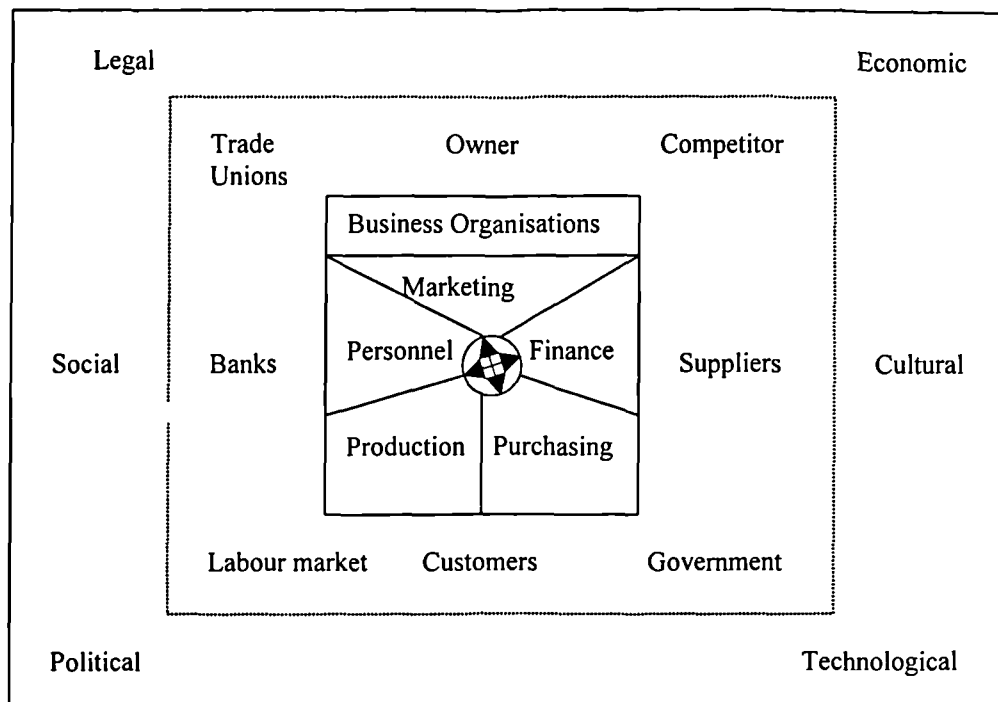
In the attempt to understand financial management approaches of small businesses, this research commences by viewing small business as a system consisting of interdependent sub-systems performing various functions for the system. Financial management is just one of the sub-systems which depends on other sub-systems such as marketing and production in performing its functional role.

A systems model as depicted in Figure 2, derived from Lawrence and Lee (1995), positions a business organisation not only as a system but as an ‘open-system’, a system in which inputs and outputs cannot be easily predicted and controlled because the firm is exposed to the influence of its external environment. Thus, as an open-system, small business must deal with a range of complex and changing features in its environment. The argument by Puxty and Dodds (1992) on the outward looking nature of financial management derived from the need to appraise various investment and financing alternatives which brings it into contact with the external environment portrays financial management as an open sub-system.

The systems model conceptualisation shows how '*total context*' is the crucial frame within which to understand a sub-system of the small business- such as financial management. It emphasises the need to try to understand how the approach to financial decision-making unfolds within a context of its interaction with other sub-systems, i.e. its internal context, and its interaction with the external context.

Figure 2

**The systems model (Lawrence and Lee, 1995)**



### **3.4.2 The Rationale for a Strategic Perspective to the Study of Small Business Financial Management**

The positioning of small business as an open system demonstrates how an attempt to understand financial management difficulties and approaches of small business must recognise that financial decision-making takes place within the context of total small business activity and development. Hence, real understanding of these issues is likely to derive out of research insight into small business management processes from an integrated perspective. In relation to this, Atherthon and Hannon (1995) highlight the

conceptual weakness of breaking down the small business into bite-sized components which are easy to digest but which then does not think about reconstituting the components back into the whole. Thus, in order to avoid distortion of understanding of small business financial management and difficulties which selective out-of-context focusing bestows, it is propounded that analysis should be conducted within the context of total strategic activity of the firm under investigation.

In this study, strategic development of the firm will be discussed in terms of the product, process and market development of the firm (see Wyer and Smallbone, 1995). To effectively develop in terms of market, product and/or operational processes within its total context, the small business must undertake a variety of financial decisions (for example, new capital investment and new credit policy). And it is the external contextual forces *and* inner sub-systems forces which will provide the total context within which financial decisions must take place

#### **3.4.3 Conceptualising the External Environment within which the Small Business Operates**

The open-system view and the strategic perspective call for considering the influence of external forces on the issues under study. As can be found in the strategic management literature, there is a variety of ways of conceptualising the environment facing a contemporary firm. As a starting point, the author propounds the need to consider a more general issue on how the external environment impacts on a small business. The overall external environment, no matter what it is composed of, affects organisations through the level of uncertainty inherent in it. This conceptualisation has high potential utility with regard to the study of decision-making processes or other managerial aspects of a business since the level of uncertainty or the types of change in the environment affect the ability to foresee the outcome of an action or decision. Having conceptualised the level of uncertainty, the external environment needs to be considered as consisting of various factors impacting on the business. This enables the identification of specific external contextual factors which influence financial

management in small business. Finally, is the need to consider the ‘interplay’ or the linkages between the external and internal context.

**a) The Level of Uncertainty of the External Environment**

Duncan (1972) discusses the uncertainty in the environment in terms of the degree of complexity and stability. He distinguishes a static environment from a dynamic environment, and a simple environment from a complex environment. By dynamic environment, he means that the frequency, rate and extent of change are all high while the complex environment refers to the situation involving the change of many interconnected variables (Stacey, 1996). Based on this conceptualisation of external environment, Duncan suggests different decision-making modes for different types of environment.

Stacey (1992; 1996) discusses the uncertainty in the environment in terms of the timing and the magnitude of the changes *and* the predictability of the timing and magnitude. He thus conceptualises the environment into three types of change: closed change, contained change and open-ended change.

*Closed change* is predictable both in terms of its timing and its magnitude. An example given by Stacey is accepting an order from existing customers. “It is perfectly possible to predict virtually all the operational and money flow consequences of the change” (Stacey, 1992: 307)

*Contained change* is change of which “we are able to say what will probably happen, we will be able to give probable reasons for its happening, we will be able to say when the consequences will probably happen and what their magnitude will probably be” (Stacey, 1992: 308). This kind of change may involve the occurrences of large numbers, availability of past data or as repetition of what had happened in the past that enable the construction of a probability distribution. Contained change is similar to what is denoted as ‘risk’ in the economic and financial management literature.

*Open-ended change* refers to a change situation in which we do not know with any clarity what caused the change, why the change occurred, or what its consequences were and will be. This is the situation where there is no similar past experience that enables a reliable connection between cause and effect to be made (Stacey, 1996). This type of change is similar to what is normally referred to by the financial management literature as ‘uncertainty’. It is totally unknowable and unpredictable.

Based on this conceptualisation of changes in the external environment, Stacey argues that ‘rational analytical decision-making approaches’ cannot be effectively pursued in situations of open-ended change due to the ‘unknowable’ and ‘unpredictable’ future. Wyer (1996) draws upon Stacey’s work to suggest that rational long-term planning approaches are unworkable in contemporary organisations and that in practice an alternative management approach may be adopted.

A high value contribution to the discussion on the implication of uncertainty in the environment on organisations’ decision-making processes derives from Cyert and March’s (1960) classic work. According to them, among ways organisations avoid or reduce the uncertainty in a competitive environment are by focusing on short-run feedback, using standard policies and normal business practices.

#### **b) The External Contextual Variables**

The systems model in Figure 2, adopted in this study shows that the principal external contextual forces that bear on business organisations are made up of (a) the various stakeholders that may probably have more direct impacts on the organisation: the shareholders, banks as the creditors, the competitors, the suppliers, the customers, government, labour market, potential employees, trade unions and government, and b) other factors that have an indirect impact on the



organisation through their influence on the stakeholders such as the technological state and the economic conditions.

Due to the external contextual forces being nation- and sector-specific, detailed discussion on the external context of the firms under study will be undertaken separately in Chapter 5.

### **c) The Linkage between External and Internal Context**

The external environment should be conceptualised beyond mere descriptive backcloth. The external environment must be viewed in terms of impacting change on the small business. Literature on the impact of the external forces on firms success and development is often discussed in terms of its enabling and constraining forces (for example, Pettigrew (1985), Romano and Ratnatunga (1992), Wyer and Smallbone (1995), Cole (1996))- such as the argument by Judd and Lee (1981 in Romano and Ratnatunga, 1992) that small business may not have the reserves to survive economic downturn, or may not know how to react to cyclical changes in the economy.

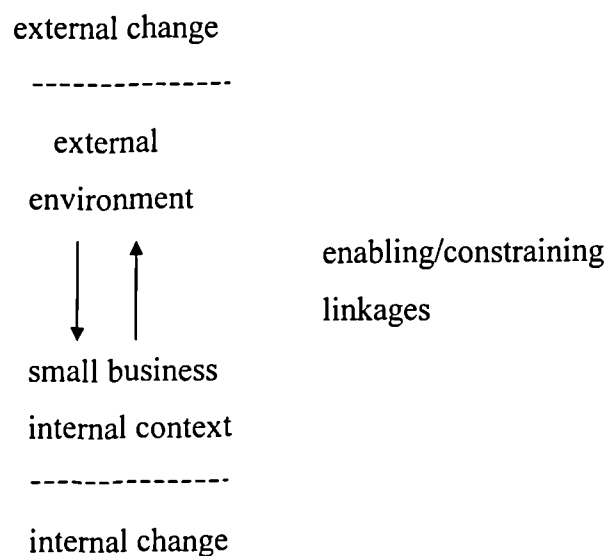
However, several studies and writings indicate that the environment can be affected itself by the small businesses action. In a study by Romano and Ratnatunga (1992) on the effect of external factors on small business growth, it is shown that adverse economic conditions do not create serious operating difficulties for their sample small businesses because these firms produce very specialised products, operate in industries that provide some protection against adverse economic conditions and manufacture products with high levels of technology. It can be said that the extent of the impact of changes in external variables depends on the characteristics of the individual firm. Looking from slightly different perspectives, Wyer (1996) argues that a small business may take action which sees it 'co-creating its own external environment'.

Thus, the external context and small business internal context should be conceptualised as a two-way linkage as depicted in the Figure 3.

The external environment is thus not mere descriptive backcloth. The two-way linkage sees the firm enabled and/or constrained by the external change, *and* by its internal management actions the small business can bring change in its external operating context. In line with this argument, is Smallbone and Wyer's (1994) emphasis on the need to 'accommodate the interplay between a small firm's external environmental forces and the size-related forces' in their build up of a framework on small business strategic activity.

Figure 3

**The interrelationship between internal and external operating environment**



#### 3.4.4 Conceptualising the Internal Context of Small Business

The internal context of small business is not exactly as that portrayed in the systems model in Figure 2 whereby activities are departmentalised into different formal functions which support each other and the owners being part of the stakeholders are outside of these internal subsystems.

Small business is usually seen as a simple organisation, yet in understanding what is going on in its internal context, especially when we are influenced by large business models, there is a need to address what is often idiosyncratic and informal behavioural patterns.

One source of complexity in understanding the financial management aspect of small business is the set of characteristics of small business which are unique in comparison to the large business characteristics as assumed in the development of traditional financial management models (Ang, 1991,1992; Pettit and Singer, 1985)

A further source of complexity lies in the kind of rationality used in decision-making. While the financial management model was founded on the 'instrumental' form of rationality, other forms of rationality may come into play and thus help in explaining the gap between practice and theory (Jarvis et al., 1996)

#### **3.4.4.1 The Unique Characteristic of Small Business**

A rapidly growing body of theoretical and conceptual literature on small business management seems to support the connotation that 'small business is not a little big business', or in other words that the small business is qualitatively and quantitatively different (for example, Smallbone and Wyr, 1994). Discussed within this literature are the distinguishing characteristics of small business, which underpin the expectation that small businesses are behaving differently to their large counterpart in certain aspects of their management. Many studies have in fact revealed some of the unique characteristics and unique problem types of small business. Thus, Carson (1991) has criticised small business research that explicitly and implicitly assumes small firms are a microcosm of large firms, while Gibb (1992) warns researchers of the danger in applying concepts, models and theory that are large firms' oriented in the study of small business. For Smallbone and Wyr (1994), small business should be treated as a unique problem-type, thus what they have called size-related characteristics are given appropriate emphasis in their conceptual framework on small business exporting activities. Romano and Ratnatunga's (1992) work drawn on in the previous section

represents another example. In this study, the emphasis on the internal context of small business operation enables these unique characteristics to be incorporated in the framework of understanding small business financial management and financial decision-making.

Valuable insight on the unique characteristics of small business is here gained from review of the international literature and interviews with Malaysian small business authorities (government agencies and owner-managers). As stressed by Ang (1992) there is no such thing as a typical small business. But one common characteristic integral to owner-managed firms is the importance of *owner-manager characteristics* in shaping small business operations and development activities. Moreover, most small businesses do share other common features in the form of *size-related characteristics* which clearly distinguish them from large companies. However, there are also variations in small businesses in terms of their legal formation, whether they are new or established firms and whether they are growth or non-growth businesses. These characteristics are referred to in this study as the *enterprise characteristics*.

In the following sections, these factors and characteristics are elaborated and discussed in terms of their implications for small business management in general. The discussion will demonstrate how these three types of characteristic impose on each other and, as argued in the previous sections, some are derived out of the small business interaction with its external operating environment.

#### (A) **Owner-Manager Related Factors**

A key characteristic often associated with small business is the personalised management style and the owner-managed type business (Gore et al., 1992). The Bolton (1971) study, one of the earliest well-known and widely cited studies in the U.K, includes this characteristic as part of its qualitative definition of small business. Since the owners are predominantly the lead managers as well, and often the only manager, their attributes, prejudices, personalities, motivations and values which, according to Wyer and Smallbone (1995), form the 'organisation culture', are expected to have

considerable influence on the small business management style and decision making processes. Consequently Wyer and Smallbone *and* many other authors and researchers urge that any aspect of small business should not be studied or viewed in isolation from its owner-manager's characteristics.

Since small business owner-managers are not an homogeneous group that can easily be classified or expected to behave in a certain manner, their influences on small businesses cause non-uniformity and diversity. This, however, motivates an extensive amount of research into understanding the various types of small business owner and his/her role in small business management. Many classifications of 'owner-manager' have then been derived ranging from a simple two groups classification of 'craftsman' and 'opportunist' to a long list of entrepreneurial types. One acceptable role typology that is restated and extended by Stanworth and Curran (1976) classifies owner-managers into artisan entrepreneur, classic entrepreneur or managerial entrepreneur. The following is a summary of Stanworth and Curran's typology (Pitt, Szarka and Bull, 1991: 21).

*Traditional artisanal entrepreneurs* are skilled but lack formal education, business-related or otherwise and are product/production driven. They include well-qualified founders of high technology firms lacking prior commercial experience. *Classic entrepreneurs* are no better qualified than the artisans, but have an overtly commercial outlook and their firms are market and opportunity driven. They are less directly involved in operations, more willing to delegate and hire specialist managers. Their firms tend to grow faster. Stanworth and Curran posited a third type, *managerial entrepreneur*, second and third generation owners whose major problem is to generate new growth initiatives.

This infers that there is a relationship between the types of owner-manager and the types of management but the typology is still not a satisfactory one because there are other types of owner-manager which fall in between the categories or are not explained by the typologies. Analysing past research on the typologies of owner-managers, Curran (1989) remarks that the results produced are uneven. This has directed this study to focus on several basic attributes that are commonly recognised to have some influence over the management as opposed to using any suggested typology. The review of the literature suggests the following:

- *The desire for control* - Studies have argued that the strong needs for control tend to be linked to managerial styles which show a marked reluctance to delegate authority, set up well defined role structures within the enterprise or to plan for the future (see Curran, 1989).
- *Risk taking propensity*- This is an attribute commonly associated with small business owner-managers. Small business owners are characterised as risk takers for taking the initial risk of starting their own business (Ang, 1991, 1992).
- *Entrepreneurial alertness* - this is a concept developed by Kirzner (1973 in Kaish and Gilad, 1991) to describe entrepreneurs' involvement with the discovery of opportunities and resources through information seeking behaviour. Kaish and Gilad (1991: 49) take forward Kirzner's idea and suggest that the 'alertness' is reflected in the "continuous search for information through broad and indirect scanning that will take place at unconventional times and places, as opposed to a directed, rational approach". The 'alertness' characteristic of owner-managers is thus associated with high reliance on their own subjective impression as opposed to using a systematic kind of analysis in appraising opportunity. Wyer et al. (1996) demonstrate the presence of this characteristic in Malaysian small businesses through in-depth case study.
- *Self-confident and self-reliant* - These are attributes of the owner-manager which have been found to have determined certain management decisions. It is reflected in owner-managers' faith in their "gut" feeling or "being immensely intuitive" (Brytting, 1991). Another terminology which is commonly used to describe this is 'the internal locus of control'. Ward (1993: 36) suggests that "...an internal locus of control person is willing to plan for expansion of his small business despite high unemployment and interest rates in the immediate economic environment". The argument by Kaish et al. mentioned above suggests that the 'alertness' characteristic leads to self-confidence and self-reliance. Self-reliance and self-confidence, on the other hand, has a high tendency to result in less use of the traditionally formulated analysis in decision-making.

- *Multiple and non-monetary goals*- Instead of aiming for a single overriding aim, the small business may have other goals as inspired by the owner-managers (Ang, 1991, McMahon, 1995). Their goals could be linked or related to the other attributes discussed above. LeCornu et al. (1996) review the empirical literature on the objectives and motivation of small business owner-managers and conclude three important issues: (1) owner-managers may not have a single overriding aim but rather their intentions are likely to be numerous and complex; (2) they have motives which are unequivocally non-monetary; and (3) they have considerable freedom to pursue objectives, monetary or otherwise. In a study on small business start-up, Birley and Westhead (1993 in Burns and Dewhurst, 1996) identified how reasons for starting a business can be categorised into seven components:

- (a) a need for approval
- (b) a need for independence
- (c) a need for personal development
- (d) welfare consideration
- (e) perceived instrumentally of wealth
- (f) following role model

Failing to understand the underlying motives of owner-managers or assuming that small businesses are pursuing the economic objective normally thought to be pursued by business organisations may result in misleading research findings such as those which conclude that financial analysis is not important to small firms due to no relationship being found between financial analysis and financial growth. It can be argued that if an owner-manager actually performs the financial analysis, he or she would incorporate results from the analysis into his or her decision-making to achieve whatever objective he or she is aiming for. He may for example, be satisfied with the present performance and therefore take action that will maintain this level of performance and thus lead to no growth. The objectives function of the owner-manager also may explain why cash flow or working capital management has appeared to be a more popular issue in small business management compared to capital budgeting, since working capital is associated more with maintaining the solvency or survival of the business while capital budgeting is concerned with creating wealth. This is in line with Jarvis et al.'s (1995) findings which reveal that owner-managers in small firms associate their cash flow management with the objective of survival. In short, multiple differing objectives

believed to be pursued by small business owner-managers are sufficient to pre-condition a different nature of small business financial management.

- *Functional background* - Pelham and Clayson (1988) show that the functional background of the owner-manager has some effect on the implementation of small business strategy. The owner-manager tends to emphasise working behaviours closely related to his former position. For example, sales people tend to emphasise interpersonal roles, while accountants emphasise information roles.
- *Knowledge base* - The knowledge of the owner-manager acquired through formal education or training is believed to have considerable influence on small business management. This is implied by the government and other concerned organisations such as banking institutions through their emphasis on the management training programmes designated to improve management capability of small business owner-managers.
- *Values toward scientific management techniques* - According to Gibb (1983) owner-managers' values towards scientific techniques might also influence the utilisation of these techniques in small business management and decision making. For Gibb, small business uptake of scientific techniques is unlikely.
- *Owner-managers' values and beliefs* with regards to certain issues, for example in the case of Malay owner-managers, their values towards certain Islamic principles such as the wrong-doing of receiving and giving interest might have some influence on their financial management. They might be reluctant to use any financial instruments, tools or technique that involve the element of interest.

#### (B) **Size-related factors**

Apart from the owner-manager-related characteristics, other size-related characteristics often associated with small business can be identified from the literature. Some of the characteristics are interrelated, some result from the owner-manager-related



characteristics and some emerge from the small business interaction with the external environmental forces. These characteristics are as follows;

- *Informal management structure* - In many cases, the owner-manager personal inputs into all aspects of a small firm's operation often result in an 'informal' and 'loosely structured' management process (Carson, 1991; Ghosh and Chan, 1994). As was mentioned before, the *desire for autonomy and independence* is argued to underpin owner-manager's reluctance to set up a well-defined role structure within the enterprise. There is also a reluctance to delegate operational decision-making (Gore et al., 1992). Gore et al. also highlight the high degree of informal interaction between the owner-manager and the employee.
- *Non-diversified investment portfolios* - A small business investment usually is lumped into fewer different assets and they are more product, customer or geography specific than a large business (Ang, 1991).
- *No publicly traded securities* - Under the definition of small business used, the majority of small businesses have no publicly traded security (Ang, 1991). Even though, the introduction of the Second Board in Kuala Lumpur Stock exchange (KLSE) has provided them with a way to get published, most of them that are listed cease to be small under the definition. This characteristic of small business renders financial management theory, models and research that involve the analysis of impact on stock prices to be meaningless to the small business sector.
- *Absence or ineffective limited liability* - No matter what the organisation legal form of a small business is, it does not effectively enjoy the benefit of limited liability (Ang, 1991). Those that are formed as sole proprietorships or partnership face unlimited liability. For those that are in the form of corporation (private limited company), the limited liability provision is usually ineffective because they are often required by lenders to secure their loan with their personal assets which means that owners are unable to protect their personal assets in the event of business failure.

- *Lack of specialist management* - Studies on small business, including those in Malaysia, show that small businesses face both a lack of skilled operating workers and a lack of specialist management or expertise (Curran, 1988; MITI, 1994; Pool, 1995). The lack of specialist management derives from several sources:

- (a) Tight financial capabilities constrain small business from (i) offering higher wage and better fringe benefits than those offered by large firms (Curran, 1988; Pool, 1995), (ii) sending workers for training (Gibb, 1983; Poll, 1995) and, (iii) offering an attractive working environment. These deficiencies cause small business to struggle in competition with larger firms for specialist managers. Even if managers are hired there is a high possibility that they represent the lower-end of the specialist market;

- (b) Most owner-managers are reluctant to delegate major tasks to outsiders (Gore et al., 1992) either because of the desire for autonomy and/or because of their personal stakes in the business;

- (c) Small size together with the owner-manager's reluctance to delegate major tasks results in unchallenging work for outsiders. This causes difficulties for small business in attracting specialist managers;

- (d) Managerial competency in small businesses thus is often limited to the owner-managers and their relative functional backgrounds or experiences. Furthermore, since there is no formal selector (as in the job market), they can be recruited into the firm regardless of education and training backgrounds. Gore et al. (1992) argue that small business is likely to be particularly weak in development areas that benefit from specialisation.

- Business operation is *potentially more flexible* - As a result of an *informal management structure*, small businesses potentially can change the nature of their operation more rapidly in response to changes in technology and business environment. The benefit of flexibility, however, has been argued by Wyer and Smallbone (1995), as

dependent on the ability and expertise of owner-managers to detect changes opportunities or threats and respond to them. It will also depend on the aim of the owner-manager since owner-managers who aim for stability might not want to change or take advantage of the opportunity, while those that aim for growth would do the opposite.

- *Serious information problems* - By not being public listed companies, small businesses have low information reporting requirements that leads to serious information problems. The situation is even worse in incorporated firms as a result of low government requirements for financial reports. The informal management structure and the personalised management add to the problem since information is kept by the owner and there is usually no requirement for communication of the information to other key personnel. Information problems in small business can be classified into two types:

- a) *Asymmetric information problems* - Asymmetric information problems, arise when there is a potential for large differences in information held by 'insiders' and 'outsiders', (Pettit and Singer, 1985);

- b) *Low quality information problems* - This problem arises when there is insufficient or unreliable data, such as track record, on the business operation (Ang, 1991).

- *Different set of agency problem* - Due to being an owner-managed firm, the agency problems between owners and the management are almost non-existent in such small business. The implication is that the firm would probably be pursuing the goal of the owner-manager, whatever it may be. On the other hand, more serious agency problems are faced between owner-managers and the outside stakeholders such as creditors and suppliers due to several characteristics discussed above, especially the asymmetric information problem (Ang, 1991; Pettit and Singer, 1985). This partly explains the finance problem often faced by small business.

- *High risks venture* - There is a high degree of risk in small business (Petty et al., 1993) which can be associated with several features mentioned above; a) the risk-taking propensity of the owner-manager, b) the flexible operation, c) the non-diversified

business, d) the information asymmetry, e) the absence of limited liability. Out of these, the non-diversified business is the most common factor emphasised by the literature to be associated with high uncertainty of small business. From the standpoint of finance theory, it results in small business not only facing systematic risk (market risk) but also non-systematic risk (unique risk) not faced by a large diversified firm. Storey and Sykes (1996) and Storey (1994) elaborate that the risk or uncertainty faced by small business is derived from the following:

- (i) the inability to influence price within the market by changing the quantity of output it produces because of the lack of market power;
- (ii) the limited customer and product base, and
- (iii) the diverse aspiration, motivations and abilities of the owner-manager.

There is also evidence that there is more *involuntary liquidation* among small business than among larger ones. Ang (1992) argues that among the factors contributing to this are a *shorter expected life* and the *burden of estate tax*.

- *Poor Management*- Managerial deficiency has been claimed in much literature to be the cause of small business failure. Several factors that have been associated with this problem are:

- a) Lack of specialist management - Lack of specialist managers was widely quoted as the main characteristic of small business (see Dewhurst and Burns, 1993). It is suspected that this attribute may cause incompetence in using complex management concepts and techniques in small business management and decision making.
- b) Inability to cope with the demands of multi-tasking - Much literature has highlighted the high possibility of owner-manager reluctance not just to delegate major tasks but also operational and administrative tasks to other

individuals because of the reasons discussed above (for example, Gore et al., 1992; Wyer, 1991; Jennings and Beaver, 1997). Gore et al. argue that this is the case in both simple and functional management structures. As a consequence of this, the literature foresees that the owner-manager is often bogged down with the day-to-day operation of his business on top of handling other functional tasks and thus is often unable to focus his attention on any particular management activities due to timing and/or ability constraints.

c) Negative attitude towards training as shown by Smallbone et. al (1993).

- *Serious finance problems*- Finance problems, that is, difficulty faced by small businesses in raising capital, have been found by many studies in the U.K and Malaysia to be the major problem faced by starts-up and growth small business (see Moore, 1994; MITI, 1994; Poll, 1995). There are also strong theoretical underpinnings that support the existence of the problem as discussed by Keasey and Watson (1993) and Binks et al. (1992). The problem stems from various internal and external factors:

a) Limited sources of financing - Sources of financing for small businesses are limited only to debt and private equity for several reasons:

- (i) no publicly traded security means an unavailability of a major facility (entry and exit) for the public to act as equity contributor;
- (ii) most venture capitalists often limit their investment in firms with turnover exceeding £500,000 which excludes many small businesses. According to Boocock (1995), venture capital in Malaysia is also targeted at large firms. However, a government back-up organisation known as PUNB has been formed to offer equity-type financing catering especially for high technology small and medium industry.

b) High cost of capital- Theoretically, the cost for external financing charges for small business is higher than the cost for large business. The high cost results from:

- (i) high monitoring costs (cost to monitor actions and behaviour of owner-manager) resulting from an information asymmetry problem incurred by outside suppliers of funds (Pettit and Singer, 1985; Ang, 1992). This cost must actually be borne by the small firm in the form of high cost of capital;
- (ii) high flotation and transaction costs - High flotation costs add to the cost of raising capital. The high transaction costs incurred by outside suppliers of funds will be reflected in a higher rate of return required from the investment which means a higher cost of capital (Ang, 1992);
- (iii) high risk venture- Outside suppliers of funds will require higher return from a higher risk investment which means higher cost of capital to small businesses.

c) The 'inaccessibility' to external financing - Much literature on small business financing problems in the west (for example, Binks et al., 1992) and also in Malaysia (for example, Poll, 1995) indicates that many small businesses do not have access to the available external funding. Haron and Shanmugam (1994) and Poll's studies show that some of the reasons for the 'inaccessibility' are the inability to fulfil the requirements imposed by the financier such as the amount of collateral, the administration and form filling and the short pay-back period.

- *The 'adaptive' and unconscious strategic decision-making process-* According to Jennings and Beaver (1997), strategic decision-making in small business often takes the form of an adaptive process involving the manipulating of a limited amount of resources, usually in order to gain the maximum immediate and short-term advantage. Strategic decision-making is undertaken because of the need to adapt as quickly as possible to the changing demands of the environment and to mitigate the consequences of any threatening change which occurs. Wyer (1990) describes this for some businesses as 'fire brigading' from one crisis to another. This adaptive process according to Gore et al. (1992) results from the heavy involvement of the owner-manager with day-to-day operation of the business.

Another attribute of the strategic decision-making in small business argued by Jennings and Beaver and Wyer and Smallbone (1995) is its existence in the form of abstract, invisible and almost unconscious process as opposed to a concrete, written form. Visible long-term planning might not be observable within many small businesses but the owner-manager may know exactly how his firm stands competitively in the market.

However, in the study on small business exporting activity, Smallbone and Wyer (1994) demonstrate the presence of strategic awareness (a combination of processes that look at, understand and learn from the external environment) in all of the active exporting firms in their study.

#### **3.4.4.2 The Form of 'Rationality'**

As financial management is concerned with guiding financial decision-making, greater understanding of the factors that explain and influence a particular financial management approach and its gap or distance from traditional financial management can be achieved by understanding the reasoning, or in other words, the rationale, which underlies a financial action. However 'rational' may mean different things to different people and be addressed from different perspectives.

The widely accepted concept of 'rational decision', shared by many approaches to the study of organisations has its roots in neo-classical economics (Gore et al., 1992) and was defined by Gore et al. (p.4) as "a decision based on a logical process of adopting means to achieve a particular end or objectives. The term 'rational' does not denote approval or disapproval of the objective; rather it refers to the method of achieving the objective". It is based on the assumption that man would prefer to use resources as efficiently as possible and that he is substantially motivated by self-interest. This form of rationality is described by Stacey (1996: 32) as "a method of deciding that involves setting clear objectives, gathering the facts, generating options and choosing one that maximises or satisfices".

Gore et al. elaborate on the requirements for 'rational' behaviour among which are (i) an economic objective that can be quantified, (ii) stability of preferences over time, (iii) unlimited information processing abilities by those involved and an ability to see their own self-interest and act accordingly and (iv) a well defined mutually exclusive alternative. This model of 'rationality' allows "the construction of closed models which have predictive ability within their limited confines" (p5). Many economic models are based on a restrictive version of this model of rationality known as 'economic rationality' which considers 'profit or wealth maximisation' as the only valid objective.

However, in the real world various violations in the assumption underlying the implementation of technical rationality are present which constrain managers from deciding by using this form of rationality (see Gore et al., 1992; Hindess, 1988)).

Stacey (1996) refers to the 'rationality' described by Gore et al. as 'technical rationality'. This is to differentiate it from two other forms of rationality. The first form, 'reality testing', considers rationality as involving the testing for reality where the reality may be of an emotional, ideological or cultural kind, but not fantasy driven. Being rational means being sensible, reasonable in circumstances, sane, not foolish, absurd or extreme. The other form of rationality, which is simply referred to by Stacey as 'rational behaviour', involves behaving and deciding only on the basis of propositions that can be consciously reasoned about, rather than on the basis of customs, norms, emotions and belief.

Literature on 'rationality' also draws on Herbert Simon's (1960) argument on the limitations on human brain processing capability in the sense that individuals are "unable to take account of all the available information, compile an exhaustive list of alternative courses of action, and ascertain the value and probability of each of the possible outcomes" (Hindess, 1988: 69) and therefore make technical rationality impossible to be applied. Hogart (1987 in Gore et al., 1992) too, draws attention to this issue and explains that the limited human information processing capacity is the consequence of (i) selective perception of information (influenced by human's value and attitude), (ii) the nature of processing, (iii) processing capacity and (iv) memory



limitation. The 'rationality' literature thus highlights Simon's concept of 'bounded rationality' which according to Hindess, is the best-known alternative of perfect rationality and according to Stacey, is a weak form of technical rationality.

Instead of screening all the facts and generating all the action options before making the choice, managers, in common with all humans, take short cuts. They employ trial and error search procedures to identify the most important bits of information in particular circumstances; they identify a limited range of the most important options revealed by the search; then they act knowing only some of the potential outcomes of their actions. This means they cannot take the action that maximises their objective. Instead they satisfice. (Stacey, 1996: 34).

According to the above explanation of Simon's bounded rationality, procedures, rules of thumb and habit are adopted to simplify calculation and the search for information in order to overcome the limit on human cognition. The decision-making process is one where 'minimum acceptable' requirements or 'good enough' solution are met rather than one which produces a maximising result. Simon refers to this as the satisficing behaviour. There is also a tendency to take incremental decisions, that is, a decision with consequences as small and containable as possible in order to reduce the uncertainty (since all the possible outcomes are not known).

Other prominent literature on the notion of rationality comes from Weber (1968). Weber first distinguishes between behaviour and action, the two forms of human activity. Behaviour is defined by Weber as the "activity which involved no deliberation or consciousness or intention in the mind of the person who exhibits such activity" (Jones, 1992: 137) while 'action' is the opposite of behaviour for it is underpinned by intentions and motives.

Weber then classifies social actions into 'non-rational' action, 'rational' action and 'rationality' as summarised by Jones in Table 2.

For Weber, rationality denotes the mode of thought that gives meaning to action and thus is different from what he terms as 'rational action'. According to him, actions are complex whereby the rationality underpinning a particular decision is not necessarily 'formal' but often takes the form of what he refers to as 'substantive' rationality. By

formal rationality, he means actions which can be understood because they can be interpreted in terms of some calculative model. Substantive rationality on the other hand, represents action that is influenced by the actor's ultimate ends, principles and values.

Hargreave Heap (1989), another significant contributor to the notion of rationality, proposes other classifications in the form of instrumental, procedural and expressive rationality. Instrumental rationality refers to action in relation to some clearly specified criteria which will best satisfy an actor's objectives defined in terms of the actor's desires. It is associated with human's attribute of being purposive. This form of rationality is similar to the 'technical rationality' discussed above.

Table 2  
**Weber's types of social action**

Non-rational action	Rational action	Rationality
Traditional action (based on custom and habit)	Value-rational	Substantive (calculatability of means-end)
Affective action (based on emotion)	Purpose-rational	Formal (calculatability of means)

Source: Jones (1992)

'Procedural rationality' refers to action guided by some shared procedures (norms) or rules of thumb (Hargreave Heap, 1989). One example given by Hargreave Heap is 'give way to the right rule in the cross-road game'.

Give way to the right' has become an institution in that society, and it has become a part of the culture context which would enable us, together with other procedures, to explain the complicated meanings and expectations which agents in that society would attach to the following of such rules (p.116).

The term 'procedural rationality' was actually posed earlier by Simon who refers it to any action guided by a rule of thumb rather than by an optimising calculation. As discussed earlier, however, Simon associates procedural rationality only with the

inability to cope with uncertainty, cognitive complexity and human cognitive powers and limitation. Hargreave Heap, on the other hand, argues that besides limited computational ability, procedural rationality is underpinned by custom and habit and that it is associated with human's attribute of "being a socially and historically located creature" (p.148).

The final type of rationality, 'expressive rationality', is concerned with deciding on, creating or exploring the ends pursued (Hargreave Heap, 1989). It is considered rational because it is associated with the purpose of making sense of the world. Hargreave Heap developed this concept based on Berlin's (1958) writing:

I wish to be somebody, not nobody; a doer deciding not being decided for, self directed and not acted upon by external nature....this is at least what I mean when I say that I am rational and that it is my reason which distinguishes me as a human being from the rest of the world. I wish, above all, to be conscious of myself as a thinking, willing, active being, bearing responsibility for my choices and able to explain them by references to my own ideas and purposes" (in Hargreave Heap, 1989: 149)

Hargreave Heap relates 'expressive rationality' to the concept of 'autonomy' and psychology concepts of 'self-esteem' or 'self-respect' and 'feeling good about yourself'.

Procedural rationality and expressive rationality thus may help in explaining the gap between traditional financial management and the actual financial management practice in small business. This wider concept of rationality allows us to visualise small business owner-managers as rational creatures even though they are not 'instrumentally' or 'technically' rational. Jarvis (1996) uses the Hargreave Heaps overall notion of rationality to understand the gap between the prescriptive financial management theory and the empirical evidence related to working capital decisions in small business. The findings show that small business cash flow management is guided by procedural rationality whereby the decisions are made based on what is considered as the norm.

Thus taking on board Hargreave Heap's notion of rationality, it is necessary to consider the social and cultural context in which a financial action took place and the decision-makers or owner-manager's characteristics such as the 'desire for autonomy' and 'self-

asteem' in order to understand small business financial decision-making. This is in line with the earlier intention to incorporate the internal and external small business context into the research framework.

#### **3.4.5    The Strength and Weaknesses of Traditional Financial Management Tools and Techniques**

The utilisation of traditional financial management tools and techniques in small business may be influenced by the inherent strengths and weaknesses of the techniques themselves.

The strengths and weaknesses of traditional financial management techniques have been well documented and discussed in the financial management literature. Thus only a summary will be included here, with greater attention afforded to the debatable issues such as the failure to incorporate 'hard to quantify' cost and benefit.

a)    *Advantages of the payback technique:*

- \*    It involves a simple calculation because the calculation is straightforward and easy to understand.
- \*    It emphasises on liquidity.
- \*    It takes account of the timing of return.
- \*    It measures the amount of time the firm is exposed to the *risk* resulting from the investment
- \*    It represents a 'short-cut' or 'rule-of-thumb' which estimates fairly the NPV in the case where cash flows of the project are constant or the cash flow after the payback period resemble the earlier cash flow (CIMA, 1994)

b)    *The disadvantages of the payback period*

- \*    It does not fully incorporate the amount and timing of cash flows because not all cash flows from the investment are considered and furthermore the cash flows are not discounted.

- \* It does not fully consider the risk of the investment since as argued by McMahon (1993) the only type of risk it contemplates is that of some catastrophe which would suddenly cut-off the cash flow from the investment.
- \* It does not give attention to earning the opportunity cost of the capital it ties up over its full life. McMahon (1993) particularly highlights this weakness.
- \* It does not measure the overall profitability of an investment. Since it focuses on the performance of the asset in the first few years only, a short payback period may not indicate high profit overall (ACCA, 1996).

c) *The advantages of the NPV techniques:*

- \* It is a theoretically sound technique because it takes into account the amount of cash flows, the timing of cash flow and the risk of the investment by comparing cash flows on a discounted basis.
- \* It is consistent with the wealth creation objective.

d) *The disadvantages of the NPV techniques:*

- \* It requires all the cash flow throughout the investment life being projected.
- \* It involves much complicated calculation compared to the calculation for the payback technique.
- \* The appropriate discounted rate is difficult to determine. This however is overcome by using the 'residual net present value techniques' discussed in section 3.2.2.
- \* It is based on the assumption that the investment decision and the financing decision are independent, thus, it calls for the use of 'unlevered' cash flows and the weight average cost of capital. This results in two main weaknesses of the NPV techniques. First, in many circumstances the assumption is violated. Second, it causes difficulty for layman users to understand the rationale of the whole calculation (McMahon, 1993). These two weaknesses also can be circumvented by using the 'residual net present value technique'.

*e) The advantages of the IRR techniques*

- \* It is a theoretically sound technique because it takes into account the amount of cash flows, the timing of cash flow and the risk of the investment by comparing cash flows on a discounted basis.
- \* It is expressed in the 'rate of return' form which according to research in the UK, is more familiar to large firms' managers (Neale and Pikes, 1992; McMahon, 1993) compared to the total wealth measures.
- \* It is unnecessary to pre-specify a discount rate in order for the calculation to be carried and the hurdle rate can be determined informally (McMahon, 1993).

*f) The disadvantages of the IRR techniques*

- \* It ignores the relative size of the investment (ACCA, 1996).
- \* It does not correlate with the measure of wealth.
- \* There is a tendency to confuse it with AROR.

*g) The inability to accommodate intangible, qualitative or non-financial benefits*

Looking from a wider spectrum, every financial decision is accompanied by some form of intangible, qualitative or non-financial benefits. The expansion project, for example, besides benefiting the firm in terms of profit enhancement, may also benefit the firm in terms of workers' satisfaction and the firm's image.

Some decision-makers may put higher value toward these benefits either because they feel satisfied with them or because these benefits were seen as providing some indirect long-term financial benefit. Whatever, Myers (1987), Kaplan (in Romano et al., 1988) and other advocates of the traditional financial management concept of 'value', urge the need to quantify all these benefits and incorporate them into the NPV analysis.

However, no traditional financial management literature to date has satisfactorily provided guidance on how the intangible and the non-financial benefits should be handled in capital budgeting analysis. None of the texts reviewed (see references) shows how the intangible benefits should be incorporated into the capital appraisal techniques. One possible technique is to transform these intangible benefits into

monetary benefit and the other technique is to judge whether the non-quantified effect of the qualitative benefit is worth the cost involved (see Romano et al., 1988). In both techniques, the decision-maker's judgement plays a crucial role.

The inability to objectively accommodate intangible benefits in capital budgeting decision-making thus represents the main practical weakness of traditional financial management, notwithstanding its sound theoretical foundation.

### **3.4.5    The Framework of Understanding Small Business Financial Management Approaches**

In this section, the key insights from sections 3.4.1, 3.4.2, 3.4.3 and 3.4.4, *and* their sub-sections are synthesised to derive an understanding of factors that may influence small business financial management approaches.

Several surveys conducted in the U.K, the U.S.A and Australia show the low utilisation of traditional financial management tools and techniques among small businesses (McMahon and Holmes, 1989: 1991). However, there has been no empirical research studying the factors underpinning this phenomena. The insights on the operating context of small business discussed in the previous section are combined with additional insight from the literature to provide the following key factors impacting on the small business financial management approach:

- ◆ The goal of the small business and the owner-manager - Traditional financial management is closely related to the desire to maximise owner's wealth. Keasey and Watson (1993) and Petty et al. (1993) thus hypothesise that the pursuing of other motives apart from wealth maximisation is an important factor leading to the low utilisation of discounted cash flow technique among small businesses.
- ◆ The availability of a financial management specialist or skill- Peel and Wilson (1996), who find that small businesses in their study are pursuing similar motives to large businesses, argue that the lack of financial specialists is the main factor

contributing to the low usage of the more sophisticated capital budgeting techniques among small businesses.

The lack of a financial management specialist, however, may not be compensated for by the existence of an accountant for the following reasons:

- (i) the tendency of accountants to emphasise on 'profit' instead of 'value' *and* 'past performance' instead of 'future potential' (Allen, 1993, 1996b);
  - (ii) accountants by the nature of their major task emphasise more on 'standardisation' than on 'relevance' (Allen, 1995);
  - (ii) the concepts upon which accounting models are based are different from those which underpin financial management models (Allen, 1995).
- 
- ◆ The emphasis given by banks and training modules on capital budgeting techniques and their underlying concepts - This factor would influence the owner-managers' knowledge and perception of these techniques.
  - ◆ The self-esteem and self-confidence characteristics of the owner-manager as this may reflect on Hargreave Heap's (1989) expressive mode of rationality rather than the 'technical rationality' which underpins traditional financial management approaches.
  - ◆ The types of investment decision with regard to the type of 'change' surrounding it - Stacey (1996) argues that decisions involving open-ended change such as investing in a new product cannot be analysed using a 'technical rationality' mode, such as the NPV technique. However, in such circumstances 'bounded rationality' may be involved and '*rules of thumb*' techniques such as the *payback* technique would probably be utilised because it does not require the owner-manager to forecast the outcomes of the investment beyond a certain period. Decisions involving closed change and contained change may well see the possibility of the owner-manager using these techniques.



- ◆ The degree of uncertainty of the small business venture – Earlier insights from the literature (refer to section 3.4.3.) suggest that the high degree of uncertainty surrounding small business operation may influence small business financial management approaches in the following ways:
  - i. It constrains reliable estimates of outcome and long-term forecast even in decisions facing contained change situations (Petty et al, 1993). This may discourage the use of traditional financial management techniques with the exception of the *payback* technique. In addition to not requiring the owner-manager to forecast all the outcomes throughout the life of the asset, the decision based on the Payback technique allows the owner-manager to limit the amount of time the firm is exposed to the uncertainty (ACCA, 1996).
  - ii. It increases the number of criteria used to guide the decision-making (Stacey,1996).
  
- ◆ The cognitive capability of the decision-maker - The discussion in section 3.4.4.2 on Simon's bounded rationality model demonstrating the impossibility of 'technical rationality' resulting from the limited processing capability of decision-makers. The situation is expected to be worse in the small business compared to the large firm because of the lack of functional specialists and the lack of computer usage to ease calculations and predictions. It could thus be expected that complex techniques such as NPV and IRR will not be used. Instead simple techniques such as payback technique will be utilised more in the light of achieving a satisfactory level of return.
  
- ◆ The extent to which owner-managers are bogged down with day-to-day operations - this factor will determine the constraints imposed on the time available to properly analyse a decision.
  
- ◆ The owner-manager risk taking propensity - this factor may lead to the owner-manager giving much consideration to the risk concepts by applying the payback technique or the risk adjusted discounted techniques.

- ◆ The presence of prejudice and preconception- this factor is expected to inhibit the application of financial management. An owner-manager with an engineering background, for example, may prefer a more technical project or solution to a problem which may not necessarily best meet the objective of wealth maximisation. Or, a decision may be taken because 'it seems a good idea'.
- ◆ The frequent liquidity problem- this factor may lead to the desire for liquidity instead of wealth being given priority by the owner-managers (Petty et al., 1993).
- ◆ The strengths and weaknesses of the traditional financial management tools and techniques- The utilisation of traditional financial management tools and techniques in small business may result from the inherent strengths and weaknesses of the techniques themselves. However, to be able to infer this about a particular decision-making activity, there must first exist the basic knowledge of the tools and techniques, that is, knowledge on how they are derived and used in the decision-making.
- ◆ The importance of qualitative factors in the financial decision-making - Romano (1988) has noted that a research study conducted by the National Association of Accountants shows that some of the capital investment decision-making is being driven by qualitative factors such as the desire to improve operating performance, to upgrade the product quality, to make new products and to improve the firm's competitiveness. In such circumstances, the research found that there is an increasing tendency to treat the investment decision-making as a broad subject whereby the top managers will not be bound too much by what the financial management techniques say. A real example of a decision-making process that follows the above trend is found in a further study:

The study suggests starting with a strategic goal, the going through a thorough investment justification for the automated equipment, quantifying all benefits and associated costs.. if the numbers produced don't meet the hurdle rates, then one should try to quantify such non-financial items as flexibility, through-put or cycle-time, and quality. (Romano et al., 1988: 42)

The above two studies thus conclude a weakness in the traditional measurement systems that use payback period and discounted cash flow rather than emphasising on factors important to the long-term corporate strategy (Romano et al., 1988).

With regard to financing decision-making, many studies show that the selection between alternative types of financing among small businesses is motivated by qualitative factors such as the desire for independence and control (see Storey, 1994) and the restriction on the freedom imposed by financing instruments (Storey, 1994; Barton and Mathew, 1989). The inability of traditional financial management to accommodate these factors may thus be expected to inhibit its application in small businesses.

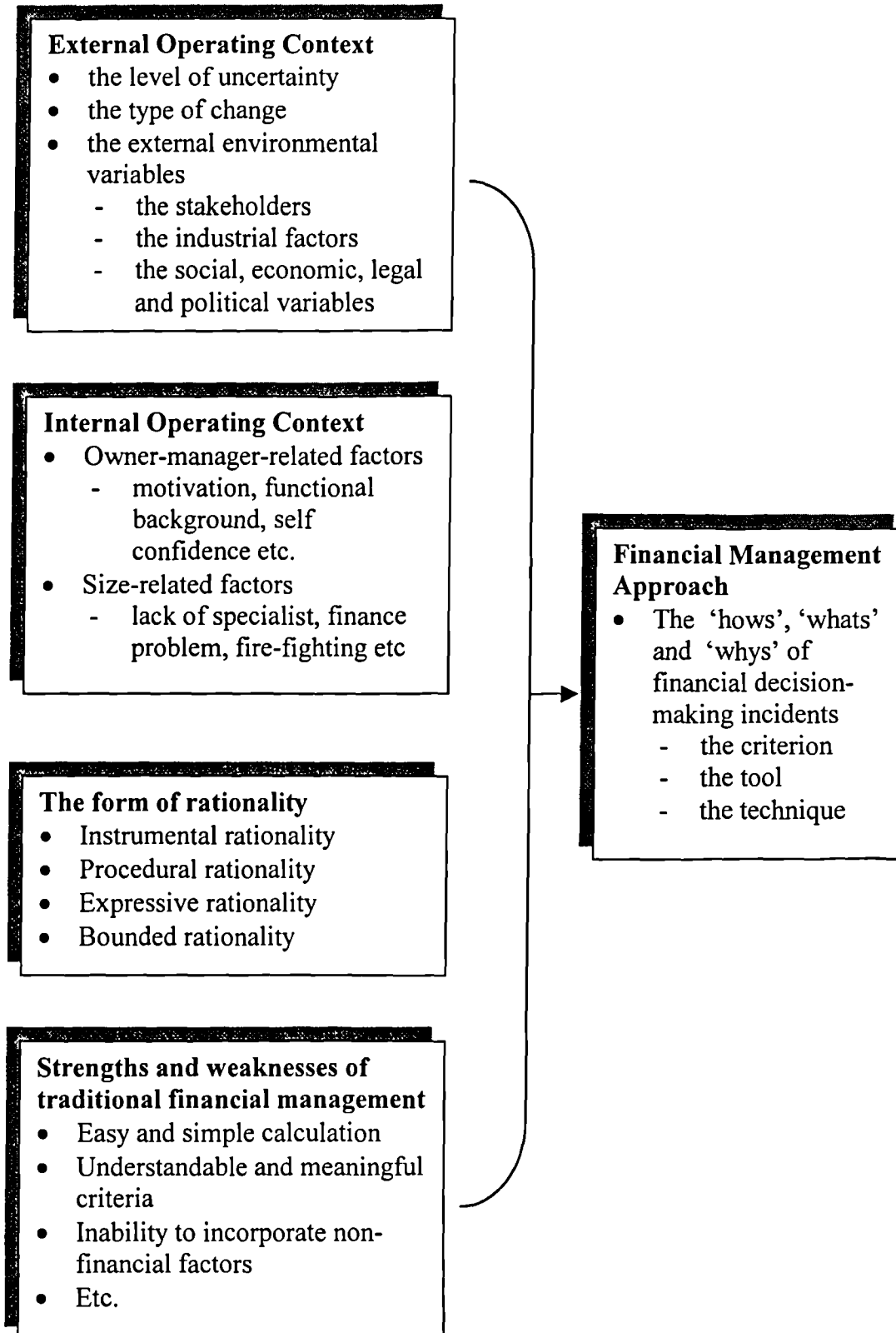
### **3.5      SUMMARY**

In summary this chapter undertakes the bootstrapping process to allow for the built of partial sub-frameworks of footholding insight. Three sub-frameworks were developed. The first sub-framework defines financial management as the ‘utilisation of financial criterion and/or financial tools and/or financial techniques to guide financial decision-making’. The second sub-framework defines traditional financial management as ‘financial decision-making with the view of creating wealth’ and conceptualises traditional financial management concepts, tools and techniques as in Table 1. The final sub-framework contextualises the factors that may impact on small business financial decision-making and financial management approaches as summarised diagrammatically in Figure 4.

In the next chapter the conceptual and contextual frameworks together with further insight from the research methodology literature will be utilised to elucidate the type of research method that would best facilitate investigation of the specific research issues of the study.

Figure 4

**The conceptual. contextual framework of factors impacting on small business  
financial management approaches**



# CHAPTER FOUR

## CHAPTER FOUR

### THE RESEARCH METHOD

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#### 4.1 INTRODUCTION

In Chapter Two saw the development of the base approach to the study in terms of highlighting the major pitfall and shortcoming of the small business management research as the frame of insight to guide toward approaching the small business research methodology. The uptake of compatible philosophical standpoint in term of epistemological/ontological stance was addressed which revealed the value of non-positivism/internal realism. This in turn highlighted the key potential role of epistemological bootstrapping as the base methodology in the footholding of the overall research process underpinning the study. Crucial to the bootstrapping process is the making explicit of the underlying theories and assumptions underpinning the research approach.

Chapter Three saw the operationalisation of the bootstrapping process, thus allowing for the built of partial sub-frameworks of relevant footholding insight. Those partial sub-frameworks in turn revealed the appropriateness of a multiple case study research method, which is elucidated in depth in this chapter.

Much of the discussion in both sections of this chapter does then link into and build naturally out of the discussion in Chapter Two and the informing input of Chapter three. The first section of this chapter thus commences by laying down the author's justifications for the adoption of the multiple case study research method in the second stage of the study, the detailed fieldwork. These justifications derive from the nature of the issues raised from the bootstrapping process and the support from the small business literature and the research method literature. Section 4.3 focuses the design of the multiple case study research.

## **4.2      JUSTIFICATION FOR THE MULTIPLE CASE STUDY RESEARCH METHOD**

The study aims to explore, examine and understand small business behaviour with regard to 'financial management' activity. The conceptual framework indicates that (i) this behaviour is only fully reflected in the financial decision-making process, (ii) there is potential for misunderstanding, double meaning and lack of insight on behalf of the respondent pertaining to the phenomena under study (iii) small businesses are not homogeneous and are largely influenced by the owner-managers and (iv) internal and external factors interact with each other to offer explanation for this behaviour. Literature has suggested that all these characteristics of the phenomenon under study support the use of qualitative research method and in particular the case study method.

Nachmias and Nachmias (1992) suggest that research that aims for understanding is best researched using the qualitative research method. In the context of financial management, support for the use of qualitative method is found in Kaplan's (1984) writings highlighted earlier and in Tomkins and Groves's (1983: 364) views that:

Academics interested in studying behaviour to accounting and the 'value' of different accounting procedures, therefore, need to place less emphasis on mathematical analyses and modelling, statistical test, surveys and laboratory test if these are not associated with specific real world problems in the sense of not relating to specific decision contexts. Such academics might profitably move more into detailed field work (i.e. recording what is happening in the setting within which decisions are made and action occurs) and focus more on how practitioners perceive their world. (in Romano, 1989: 35-36).

In the context of small business research many writings support the use of qualitative research method. Stanworth and Curran (1976) emphasise that considerations must be given to the social dynamics and the character and personality of owner-managers in researching small business. They suggest the use of case study research because of its ability to provide potential insights into how small business interacts with the environment.

Gibson (1992) also emphasises the importance of individuals in entrepreneurial processes and the need for grounded appraisal of processes being researched. Emphasis within Gibson's article is on the benefit of more interpretative frameworks which allow for more studies of the business person in action in his/her environment free of basic biases of sciences; with research strategies such as case studies being better suited to understanding complex social phenomena.

Bygrave (1989) emphasises:

entrepreneurship is not a steady state phenomenon. Nor does it change smoothly. No amount of regression analysis will help us understand what triggers the quantum jump or what happens during the quantum jump. (Bygrave, 1989: 21).

Bygrave thus strongly suggests the use of in-depth longitudinal case studies in entrepreneurship research.

While the arguments by Nachmias and Nachmias, Kaplan, Stanworth and Curran, Gibson and Bygrave presented above reflect the benefit and appropriateness of using qualitative research method in this study, the specific issues raised from the bootstrapping process (i.e. the conceptual frameworking) in Chapter Three dictate the particular need of this study for the case study research method. This derived from the characteristics (i), (ii), (iii) and (iv) of the phenomena under study mentioned earlier.

One reason for using the case study research method is that it allows the use of an open-ended semi-structured interview instrument which has the potential to provide a better quality data on decision-making processes by (a) overcoming "the restriction imposed by a structured questionnaire approach in investigating the heterogeneity of procedures" (Rickwood et al, 1987: 319), (b) allowing probing beyond the given answers (Romano, 1989) and (c) overcoming the respondents lack of insight problem. Special care however has to be taken in phrasing the research questions to overcome the researcher bias and the enactment problem.

The second reason is that the case study research method also allows the utilisation of multiple data collection techniques (such as the examination of physical artefacts)

•



which would increase the quality of information gathered. And, since this study is founded upon the philosophical foundation of internal realism which provides the bases for the co-existence of qualitative and quantitative research strategies, the case method can also utilise quantitative techniques such as the analysis of the case study firms' financial data.

Thirdly, as argued by Romano (1989), the adoption of the case study research method provides the opportunities to conduct exploratory research into how small business is managed in its context which is particularly important for a study such as this in which the conceptual framework shows that complex interactions between owner-manager factors, size related factors and external contextual factors may explain a particular small business behaviour. This opportunity has the potential to overcome the 'abstract theorising' and the 'snap-shot' picture weakness.

A multiple case studies approach is utilised in this study as opposed to a single case study because of its greater explanatory power and generalisability powers derived from the comparison of cases as observed by Miles and Huberman (1994). According to Romano (1989: 36), "it (multiple case study) gives further insight into which structure a small business theory or sub-theory may be applicable". For example, in this study, multiple case study method may demonstrate different financial management approaches being adopted in different operating contexts such as the in the contexts of a single owner-manager firm vs. a multiple owner-manager firm.

#### **4.3 DESIGN OF THE MULTIPLE CASE STUDY RESEARCH METHOD**

Once the author has decided on the adoption of the qualitative, multiple case study research, insights from Miles and Huberman (1994) and Yin (1984; 1991) are utilised as a main source of guidance for the design of the research method.

Miles and Huberman suggest that a qualitative research design should encompass the following processes; (a) building a conceptual framework, (b) formulating research questions, (c) defining the case, (d) sampling, (e) instrumentation and (f) analysis. At this stage a major difference between the design suggested by the Miles and Huberman

and that adopted in this study is identified. The difference is that according to them, the decision to adopt a particular qualitative research method is made prior to developing the conceptual framework and formulating research questions, while the approach adopted in this study commences from the standpoint that the research method is determined by the issue (s) raised from the conceptual framework (see chapter 2).

That said, the design of the research method taken on board from this stage will consist of 'defining the case', 'sampling', 'instrumentation' and 'analysis'. An additional process of the data quality control which is not suggested by Miles and Huberman is felt necessary based on Wyer (1990) and Bannister et al. (1994).

#### **4.3.1     Stage 1: Defining the Case**

The study is concerned with the financial management approach adopted within growth orientated small businesses. It is thus clear from the very beginning that small business is the focus of this study. Considering the term, 'business' includes also the service sector, at this point, it is necessary to highlight that the emphasis of this study is only on the small business in the manufacturing sector.

#### **The Definition of Small Business**

The review of the U.K. literature shows that there is no absolute definition of small business. The definition adopted by researchers varies depending on the kind of economic activity and issues being studied (Curran and Blackburn, 1994) There is also no official definition of the small business since government departments and legislation employ a wide variety of definitions ((Curran and Blackburn, 1994)

These available definitions on small business can be divided into two groups: the quantitative definition and the qualitative definition (Curran and Blackburn, 1994; Storey, 1994).

The quantitative type of definition uses quantitative criterion to define small business. Among the criteria that have been utilised are full time workers, the amount of fixed capital, the amount of shareholders' funds and the amount of paid-up capital. One widely 'utilised' quantitative definition is the European Community (EC) definition which defined small business on the basis of the number of workers whereby firms which employ less than 10 workers are classified as micro business, firms that employ between 10 to 99 workers are classified as small business and firms that employ between 100 to 499 are classified as medium business (Storey, 1994). The EC definition has recently being revised down in the light of technological advances and the following now applied:

Micro enterprise:	0 – 9 employees
Small enterprise:	10 – 49 employees
Medium enterprise:	50 – 249 employees

Qualitative definitions of small business on the other hand attempt to define small business according to unique basic characteristics. For Curran and Blackburn (1994: 53), qualitative definitions “try to capture the meanings and beliefs and behavioural aspects which distinguish a small business from larger enterprises”. The first such definition was introduced in 1971 by the Bolton Committee, a large-scale comprehensive research inquiry on the small firm and its role in the U.K economy. Three characteristics were proposed by Bolton to define small business: (1) small share of its market, (2) being managed by its owner or part-owner in a personalised way and (3) independent status in the sense that it does not form part of a larger enterprise and that its owner-managers should be free from outside control in taking their principal decisions.

The Bolton definition actually resembles the definition of Small Business under Section 3 of the Small Business Act of 1953 (as amended): “A small business concern shall be deemed to be one which is independently owned and operated and which is not dominant in its field of operation” (Peterson et al., 1986).

Another more recent attempt to define small business using qualitative measures comes from Wyncarczyk et. al. (1993). They defined small business on the basis of (1) uncertainty, (2) innovation and (3) evolution (Curran and Blackburn, 1994).

An alternative way of defining small business is using the 'grounded definition' suggested by Curran and Blackburn (1994). In this method small business is defined according to what is being perceived by the small business community.

The author sees the issue of defining small business as stemming from the approach taken, whether it is a 'bottom-up' approach or a 'top-down' approach which is actually similar to the 'chicken and egg' situation. Is it the size that leads to certain unique characteristics or the characteristics that lead to the size? Is it the size that matters, or the characteristics that matter? The last question explains the use in many research reports of specific terms such as 'the owner-managed firm', 'entrepreneurial firm' or 'the privately held firm' instead of 'small business'. Using a definition that suits a particular target group is one way of overcoming the definition problem suggested by Storey (1994).

In the Malaysian context, there is also no official definition of small business and quantitative definitions are widely used. However, one particular difference between the definitions adopted in Malaysia and those in the U.K is the wide use of the term 'industry' to represent 'firm' or 'enterprise' among the Malaysian definitions (this is inappropriate from a pure language aspect). The following represents some of the diverse definitions of small business utilised in Malaysia

- a) Chee (1987) in one of the few books on small business classifies businesses into three categories, the petty business, the small industry and the large industry. Small industry is defined as firms having more than 5 and less than 50 full time workers.
- b) The Malaysian Industrial Development Authority (MIDA) defines small industry as firms having between 50 to 99 workers, medium industry as firms having between 100 and 199 workers and large industry as firms having more than 200 workers.

- c) The Ministry of International Trade and Industry (MITI) (1994) and the Ministry of Entrepreneurial Development (MED) both define 'small scale industry' as an enterprise with shareholders' funds of less than RM500,000 and 'medium scale industry' as an enterprise with shareholders' funds between RM500,000 and RM2,500,000.
- d) The Credit Guarantee Corporation (CGC) simply defines the Small and Medium Industry as firms having less than RM2.5 million shareholders funds.
- e) The World Bank in research on technology adoption by small and medium business in Malaysia defined small and medium industry as enterprises that employ a full time workforce of between 5-49 workers and 50-100 respectively.

In this study the definitional approaches discussed above are utilised to guide the defining of the target group of the study.

The above list of definitions adopted with regard to Malaysian small businesses indicates that both the number of employees and the shareholders' funds are widely used. However, the 'grounded' approach suggested by Curran and Blackburn gives preference to the use of the shareholders fund criteria for several reasons:

- a) The shareholders funds criterion is used by MITI and MED which results in it being a meaningful criteria in terms of shaping part of the firms' environment since it determines the eligibility of the firms for various government schemes designed for the SMI in the country
- b) The interface with small business owner-managers prior to conducting the actual research showed that they are more concerned with the shareholders' fund definition because of the eligibility criteria mentioned above.

- c) The conversation with several owner-managers indicates that they consider the number of employees should reflect efficiency of the business not the size. According to one of the owner-managers in the plastic injection moulding industry, “the uses of automation and robotics leads to the reduction in the number of employees but we still grow”. The attempt to overcome labour shortage problems and to reduce costs due to the pressure by customers are other reasons for the firms not expanding in terms of the number of employees. However, the same argument can be made to reject the use of the shareholders’ funds criteria, probably from owner-managers in a labour intensive industry such as furniture.

Thus, based on (a) and (b) above the shareholders funds characteristics was taken to be one of the characteristics of the target group in this study.

In adopting the appropriate boundary for defining small business in this study, the issue on the status of medium-sized firms is considered. While all the definitions point to the presence of the medium-sized business as organisations different from the small and large businesses (similar remarks can be made on the ‘micro’ business) the study on medium-sized firms does not exist independently as a discipline. The wide use of the EC definition in many studies on small business result in the medium-sized business being a neglected area of study in the U.K.

In Malaysia, the situation is different. Medium-sized firms and small-sized firms are grouped together under the widely used term ‘SMEs’ (the abbreviation of ‘the small and medium enterprise’) and ‘SMI’ (the small and medium industry) among academicians and policy makers. This reflects the clear association between the two and the marked difference between them and large firms. The use of the term derives from the government policy on nurturing both of these industries through the various programmes and incentives under the title ‘SMI’. In other words, both types of firm are treated the same under government policy on SMIs. This provides the rationale to include medium-sized business in this study by defining small business having shareholders funds of less than RM2.5 million and employing less than 200 workers (that is, which in Malaysia incorporates medium-sized business).

However the adoption of the MITI definition of SMIs for small business in this study is not without problems. First, it is difficult to identify the sampling frame because the shareholders' funds information is rarely published in the small business directories. Secondly, the definition is so broad that it includes the micro business which is clearly excluded in much of the small business literature. As a way of overcoming the first weakness, the number of employees criteria was also used as an additional criteria since this information is normally published and thus eases the process of identifying the sampling frame. The second weakness is automatically circumvented by the use of the number of employee criteria because the micro business, normally defined as having less than 10 employees, can be excluded.

Two additional characteristics are necessary to further refine the target group in this study. The first is the 'independently owned status' of the participant firms so as not to include firms that are part of a larger organisation. This characteristic is important in a study pertaining to decision-making since non-independent small firms are likely not to be fully responsible for the making of strategic decisions. Another condition is the goal of growth.

Thus for the purpose of this study small business is defined as having the following characteristics:

1. more than 10 but less than 200 full time employees
2. shareholders funds of less than RM2.5 million
3. independently owned as per principle decision-making

#### **4.3.2 Stage 2: Sampling**

##### **The focus on plastics manufacturing sub-sector**

Insight from the Malaysian literature has been utilised to identify a growing manufacturing sub-sector as a focus in this study. The rationale for sectoral study is derived from the fact that the external environment of a business is substantially shaped by the types of sector or industry a business is in. Thus by focusing on one

or two sectors, some variations in some of the external contextual variables (for example, the product demand and the types of government incentive) are eliminated. This would lead to higher chances of meaningful findings for these particular sub-sectors given the timing and resources constraint faced by the author.

The plastic manufacturing sector was chosen because the Malaysian literature shows that it is one of the more dynamic and important sub-sectors in which small business participates (Chew, 1994). Its importance derives from its pivotal role as the supporting industry for the manufacturing sector in Malaysia mainly by supplying plastic components to the consumer electrical and electronics industry, the automotive industry and the office automation, computing and telecommunication equipment industry *and* supplying packaging and conveyance materials to various industries such as food and consumer products (Chew, 1994). According to Chew, the director of the Chemical Industry Division of the Malaysian Industrial Development Committee (MIDA), there are 1000 firms involved in the plastic fabrication and processing sub-sector out of which 75 percent of them can be classified as SMI (fixed assets of less than RM2.5 million).

Furthermore, the plastic sub-sector is one of the industries that is expected to continue expanding in the future in line with the expansion in the Malaysian manufacturing sector. This will be discussed in greater detail in the next chapter.

### **Selection of cases**

Based on the above discussion, a sample of firms having the following characteristics was compiled: a) manufacturing plastics products and b) employing more than 10 but less than 200 full time employees. Several sources of information are used as there is no complete directory of the small business in Malaysia. Three major sources of information are the 'Directory of Small and Medium Industry', the 'FMM Directory' and the 'MITI list of SMIs'.

The first 30 firms identified were sent an introductory letter followed by a short telephone conversation with the owner-managers to check the presence of three more



conditions: a) having shareholders funds of less than RM 2.5, b) being an independent firm and b) the owners' desire for growth in turnover or profit. Interview appointments were arranged with those that satisfied the conditions and were willing to participate in the study. Only five appointments were agreed at this first stage due to several constraints: the inability to talk to some of the owner-managers and the unwillingness of some the owner-managers to participate (implicitly or explicitly), in addition to some firms not meeting the independence condition.

After the first stage interview which served as 'pilot case studies', a 'purposive sampling' (Glaser and Strauss,1963) method also known as the 'maximum variation sampling' method was used to identify 5 more new firms from the above mentioned sources of information and from more elaborate telephone interviews. According to this sampling method firms are selected based on the possibility that each participant will expand the range of phenomenon under study. Thus the following characteristics were checked over the phone: 1) the owner-managers culture represented by race, 2) the level of uncertainty involved represented by the types of dealing, types of market and range of products, and 3) the availability of financial management expertise reflected from the availability of accountant and owner-manager's working background. The focus on these characteristics was made because they seem to indicate the form of influence over the financial management approaches adopted by the previous five cases.

From the ten firms that were interviewed, five firms were chosen for inclusion in the subsequent in-depth case studies because of the depth and quality of information provided by these cases relative to the other five cases.

#### **4.3.3 Stage 3: The Instrumentation**

##### **Semi-structured questionnaire**

A semi-structured interview was the major tool used to underpin the case study investigation process and was accompanied by examination of physical artifacts and direct observation. The semi-structured questionnaire was designed based on the issues

raised by the bootstrapping process. It provides guidance whilst leaving flexibility for picking up additional relevant insight at the site. The background information of the firm and owner-managers were first acquired. Informants were then asked to describe the strategic development of the firm. The rest of the interview schedules were substantively based on a critical incident approach (Yin, 1984; Curran et al., 1993), with the incident being examined within the context of the total strategic activity of the small firm case study participants. Informants were asked to recall all decisions on the purchase of machinery, and on the new funding made over the year. They were asked to describe the processes to begin to reveal the 'whats', 'whys' and 'hows' of the underlying critical financial decisions. Probes in the interview enabled clarification on responses and exploration of the approach used in the firms' financial decision-making. The focus on particular incidents placed them, therefore, within the total strategic development context of the firm and attempted to determine the key contextual forces which were impacting on the incident.

### **Pilot studies**

Pilot case studies on 3 firms were conducted to incrementally improve on the content of the interview instrument built out of the bootstrapping process in the U.K and to address any terminology, jargon or methodological weaknesses.

#### **4.3.4 Stage 4: Accommodation of the Quality Control of Data**

The quality of data was controlled through triangulation activities based on the work of Bannister et al. (1994).

1. Multi-concepts and theories have been derived out of the 'bootstrapping' process to foothold the research and inform research design. This transcends limitation that relates to explanation which builds out of frames of reference based on a single theory or concept and addressed the existence of multiple realities. This matches Bannister's 'theoretical and conceptual triangulation':

2. Interviewing two to three key individuals within each business to allow for collecting different accounts from different participants in the context under study. This represents 'data triangulation'.
3. Understanding the external context of the particular industry sub-sector within which the participant small business was operating which was derived as part of the bootstrapping process. This is to gain a contextualised picture, and thus to facilitate the determination of connection between individual and wider societal explanation. An overall intention of the research approach is to consider financial decision-making and financial management within the context of total strategic activity of the firm, thereby contextualising information and insight derived. Bannister et al. has termed this activity as 'levels of triangulation'.
4. Accompanying the interview session with direct observation and artefacts examination on site ('method triangulation').

Other activities undertaken to control the quality of data are

1. Tape recording the responses;
2. Terminating the interview series on a note of high level co-operation whereby it was agreed that the author could return to the informant for additional information.

#### **4.3.5 Stage 5: Analysis of Data**

The conceptual and contextual frameworks are utilised to develop an analytical framework to aid in analysing the findings of the fieldwork investigation. The context within which the participant small business operates is presented at the beginning of each case. The first stage of the analysis involves describing the approach taken by the firm in deciding on a financial action. The second component of analysis involves

matching and comparing this approach to the traditional financial management approach.

And, the third component of analysis involves a causal analysis involving the modelling of those variables, and their interaction with each other, which have logically influenced the small firm financial management activity or inactivity so that a processual understanding is derived of, say, a given form of small firm financial management activity in a particular context

The analytical approach will be discussed in more depth and detail in the beginning of Chapter Six, as the introduction to the analysis of the case studies.

#### **4.4     SUMMARY**

In summary this chapter provides justification for the adoption of the multiple case study research method as the mean of providing answers to the identified research questions and depth of insight relating to the associated key research issues. The design of the methodology and inherent processes were also considered and described. This was effected by the utilisation of insight from relevant areas of the literature and from key informants and included the making explicit of the definition of the 'small business' to be adopted in this study and to facilitate identification of the industry sub-sector which will form the focus context of the study. The issue of quality of the research process was also addressed.

Having identify the focal sub-sector, the following chapter contextualises the study by providing depth of insight into the Malaysian economic context and the more specific industry sub-sector context within which the field work will sit. The operating context of the sample case firms upon which the study will focus is thus elucidated.

# CHAPTER FIVE

## CHAPTER FIVE

### THE SMALL BUSINESS EXTERNAL OPERATING CONTEXT

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#### 5.1 INTRODUCTION

This chapter builds out of the indicative insight provided by the earlier bootstrapping process which emphasises the need to contextualise the small business financial management activity in terms of the impacting or unfolding enabling and constraining forces within the external operating environment. In so much as this part of the study draws upon significant secondary sources of documented input and key informant input it is also a continuing part of the 'bootstrapping' process upon which this thesis is based. Emphasis is on the nature of the small business's external context, with specific focus on the context of the small business under study: the Malaysian small business operating in the plastic sub-sector. This chapter thus contextualises the small businesses under study allowing for ultimate determination of potential connections between the micro-level of the firm (and explanations therefrom) and any wider external contextual explanations which may impact on activity and resultant understanding.

The business's operating context of Malaysia forms the broader external context within which Malaysian businesses operate. It represents the outer layer of the sub-systems model discussed in Chapter Three.

The chapter will commence by providing relevant and key background information on Malaysia, followed by a review of Malaysian economic performance. The important role played by the government will be introduced in the next section in a more general mode since specific government policy is best discussed in a subsequent area in which the policy is relevant. The development of the manufacturing sector will then be briefly discussed followed by the insight on the nature of the small business sector in Malaysia.

Finally, the analysis will focus on the more specific external context of the small business sub-sector under study namely the plastic industry.

## **5.2 DEMOGRAPHIC BACKGROUND**

Malaysia comprises 13 states, 11 in the peninsular and 2 sharing the island of Borneo with Indonesia and Brunei. The peninsular is located in the heart of South East Asia, neighbouring with Thailand in the north, Singapore in the south, Indonesia in the west and the Philippines in the far-east. Its total land area is 330,343 sq. km. Her total population is 20 million people, 42 percent of which fall within the 15-39 age group.

Malaysia is characterised by a multi-cultural, multi-lingual and multi-religious people with the 'Malay' being the dominant population group. The Malay language is the official language with Islam the official religion.

## **5.3 THE MALAYSIAN ECONOMY**

Since the attainment of its independence in 1957, Malaysia has achieved impressive economic growth. For the past ten years, the economy has grown rapidly at the average rate of more than 8 per cent per annum, making Malaysia one of the fastest growing economies in Asia. In addition to this, it also has recorded consistently low inflation and sustained export growth.

During the past four decades, Malaysia has undergone a structural transformation of the economy from an economy dependent on the production and export of rubber and tin to a more broad based economic structure. This is reflected in the substantial changes in the percentage of GDP contributed by these economic sectors and a major decrease in the percentage of tax revenue derived from commodities over this period. The changing economic structure is also underpinned by increasing export activity. Table 3 summarises this change. The changing economic structure is seen by many economists as the major contributor to the economic growth. By 1994, Malaysia had become the

world's nineteenth largest trading nation in spite of having a population of only 19 million people (Boocock, 1995).

Table 3  
**Changing Economic Structure, 1960 and 1991 (Export, Tax Revenue, GDP by Sectors)**

	1960 (% of GDP)	1991 (% of GDP)
Exports	56.1	83.5
Tax Revenue from Commodities (% of total taxes)	5.0 (31.3)	2.3 (7.9)
GDP by Sector:		
Agriculture	37.9	17.0
Mining	5.9	9.0
Manufacturing	8.6	28.0
Construction	3.0	3.8
Services	44.6	43.3

Source: Bank Negara Malaysia; Department of Statistics.

#### **5.4 GOVERNMENT POLICIES**

Underpinning the economic structural transformation and development is the role played by the government through its development of various supporting policies, plans and programmes. Apart from six five-year socio-economic plans, there are also medium range plans which are the First and Second Outline Perspective Plans which spanned from 1981 to 1990 and 1991 to 2000 respectively, and the long- term plan, known as Vision 2020, a thirty years plan to reach a developed and industrialised nation status in the year 2020 (Gan et al., 1995b).

The government also implemented a special policy in 1970, the New Economic Policy (NEP), aimed at a more balanced growth strategy, with greater attention being placed on the eradication of poverty, redistribution of wealth and the restructuring of Malaysian society to correct racial economic imbalances. Targets were set to increase the ownership of share capital of Malays and other 'Bumiputras', the term used to refer to the indigenous people of Malaysia, from 2.4 percent to at least 30 percent while those of other Malaysians were targeted to achieve between 34.3 percent to 40 percent. This



policy thus specifically aims to promote the participation of the 'Bumiputras' in the economy both in terms of employment and control of the economy. Upon expiration of the NEP in 1991, the New Development Policy (NDP) was implemented with the emphasis on rapid industrialisation. In terms of ethnic redistribution policy, the emphasis has shifted from the redistribution of wealth to the development of a Bumiputra Commercial and Industrial Community (BCIC) with the focus on the qualitative improvement of Bumiputra participation. One of the important agendas to achieve this is by promoting the technological and investment linkages between Bumiputra SMIs and the heavy industrial sector (Samsinar and Yew, 1996).

The last Sixth Plan (1991-1995) has focused attention on the industrial transformation strategy which has been classified into three specific tasks: 1) the widening of the industrial base, 2) the integral development of the overall industrial sector which incorporates SMI and 3) the continuous upgrading of the production process.

The various plans and policies are followed by numerous government incentives, programmes and schemes. The discussion of key incentives will be undertaken below.

## **5.5 THE IMPORTANCE OF THE MANUFACTURING SECTOR**

The structural transformation that has taken place within the economy is characterised by the development of the manufacturing sector. The industrialisation programme began in 1960 with import substitution policies. In 1985, the programme was radically changed to one of export oriented strategies (Gan et al, 1995b). The transformations have made the manufacturing sector the most important sector which is reflected by its contribution to GDP of 31.5 per cent in 1994 compared to 14.8 per cent derived from the agriculture sector.

The impressive performance of the manufacturing sector before 1990 to a large extent resulted from the favourable external demand, particularly for electronics and textile products, rather than from the continued increase in productivity through higher value-added production and technology upgrading (UNIDO, 1990). It was also determined

that the narrowly-based industrial structure, lack of industrial linkages and R&D, insufficient manpower training and lack of export diversification are factors threatening future growth and development of the manufacturing sector. The government, realising this, has continued to emphasise on the strengthening and widening of the industrial base. This includes (i) the fostering of strong linkages between and within sectors, and between large manufacturing firms (local and MNCs) and local SMIs through subcontracting works, (ii) the promoting of heavy, high-technology and high-value added industries, (iii) the development and upgrading of human resources and (iv) the strengthening of the science and technology, research and development base (Kok, 1994). Among the government incentives that are available to the manufacturing sector are Pioneer Status, Investment Tax Allowance, Reinvestment Allowance, Tax Incentive for Training and Export Credit Refinancing (see Kaziah, 1996).

Today, Malaysia is recognised as one of the world's leading exporters of electronics semiconductors, room air-conditioners, audio-visual equipment, and natural resource-based products such as rubber products, palm oil products and timber products (Malaysian Incorporated, 1995). With Malaysia aiming to transform itself into a mature, fully industrialised nation by the year 2020, the important role of the manufacturing sector is expected to continue in the future and so too the strategies to strengthen and widen the nation's industrial base.

## **5.6     THE SMALL AND MEDIUM INDUSTRY (SMI)**

The small business sector which (as discussed in Chapter 4), is widely referred to in Malaysia as the Small and Medium Industry (SMI), has been identified by the government as one of the main contributors to the economy as a whole and more specifically towards the achievement of industrialised nation status. This contribution is due to the following specific reasons: 1) it is an important source of employment; 2) small businesses have greater geographical dispersion, thus promoting well-balanced growth and income across regions (Kok, 1994); 3) they are the breeding ground of local entrepreneurship; and 4) they provide the necessary supporting activities to larger industries.

The importance placed on the small business can be seen to have taken place since 1950 with the launching of the Rural Industry Development Association (RIDA). However, the emphasis at that time was to improve the standard of living of the rural population, mainly the indigenous community, the 'Bumiputra', by encouraging their participation in the business sector on a small scale and to narrow the economic gap between the Malaysian Chinese and the indigenous Malays. RIDA was actually the seedbed of MARA, a body presently associated with indigenous entrepreneurs.

More serious attention was then given during the 1970's. The Second Malaysian Plan (1970-1975) already highlighted the potential contributions of the small business sector to the nation:

An important area of attention in the manufacturing sector will be the promotion of small-scale industries. Such industries can play a particularly useful role in Malaysia's industrial development. Besides contributing to output growth in the sector, they can support and complement the activities of larger industries, particularly in supplying intermediate input requirements. They also facilitate the greater utilisation of domestic raw materials and contribute significantly to employment growth.

Under the National Economic Policy (NEP) (1971-1990), the development of small business and entrepreneurship was seen as an important means to achieve the policy's aim of increasing the indigenous share of the economic wealth from slightly above 2 percent in 1970 to 30 percent by 1990. Among the efforts that have been undertaken are the establishment of the Credit Guarantee Corporation (CGC) in 1972, a body responsible for providing guarantee to loans given by banks to small businesses, and the Vendor Development Programme (VDP) in 1988, a programme designed by the government to provide small businesses with secure markets.

However, before 1986, the emphasis of government has been only on small scale business. Medium scale business was only given attention in the Fifth Malaysian Development Plan, 1986-1990, in which the concept of Small and Medium Industry (SMI) was introduced.

By the year 1990, various types of policies, schemes and grants were available to small business but the uptake was not encouraging. There is also overlap between the programmes.

## **SMIDEC**

The seriousness of the government in overcoming obstacles that constrain SMI development is reflected in the launch of the Ministry of Entrepreneurial Development in 1995 with the main responsibility for developing quality, competitive and sustainable entrepreneurship. The immediate action taken by the ministry was the setting up of the Small and Medium Industries Development Corporation (SMIDEC) in May 1996 whose membership consists of 12 ministries and 2 government agencies: the National Bank and PUNB. The body is intended to overcome the overlapping programmes problem among various ministries and to ensure the effectiveness of these programmes by striving towards a co-ordinated and integrated provision of relevant policy support for SMI.

Some of the entrepreneurial support programmes co-ordinated by SMIDEC are (1) the Industrial Linkages Programme (ILP) aimed at enhancing links between SMIs and large companies by identifying suitable SMIs to be introduced to large companies and MNCs, (2) the Technology Development Programme which aims to assist SMIs in *new product* development, upgrading of technology and developing the technology database, (3) the Technology Acquisition Programme which aims to develop in-house, indigenous research and development capacities among SMIs, and (4) the Skill Upgrading Programme which aims to develop a pool of qualified technical and managerial skills.

### **The Vendor Development Programme (VDP)**

The VDP is an industrial marketing programme, in which SMIs are appointed as the manufacturers and suppliers of industrial components, inputs, machinery, equipment and related industrial services to large industries and multinational corporations (MNCs) (Ui, 1996) Through this programme, a steady market is developed and

provided to the small and medium businesses by offering a long-term contract. Under the VDP, the customers or buyers are referred to as the anchor companies while the suppliers are referred to as the vendors.

This programme started in 1988 with the launching of the Proton Component Scheme, followed by the Electrical and Electronics Components Scheme in 1992. In 1993, the VDP was expanded under the new concept, known as the tripartite VDP in which banks and financial institutions also participate in providing the necessary financing to the vendors.

The Tripartite VDP, in general, aims to provide greater integration and linkages between SMI, large industries and MNCs and financial institutions to further enhance Malaysian industrial development. The anchor companies provide the market and technical assistance such as the quality control aspect, while the participating financial institutions assist in the financial aspects and management and consultancy services. Two forms of fund are specially allocated to the vendor firms- the New Entrepreneur Fund and the Bumiputra Industrial Fund, channelled through all the commercial banks, the Bank Pembangunan Malaysia Bhd (BPMB), the Malaysian Industrial Development Finance (MIDF) Bhd., Bank Industri Malaysia Bhd. and Bank Islam Malaysia Bhd. (MED, 1997).

Six industrial sectors which were identified as the targeted sectors in this programme include the Automotive, Electrical and Electronics, Plastics, Rubber-based, Machinery and Engineering, and Wood-based sectors. As of December 1995, it was reported that there were 54 anchor companies and 79 vendors participating in this programme.

Insight revealed by Ui (1996) from the assistance secretary of the VDP shows that SMIs need to increase their own effort in seeking linkages with any of the anchor companies in the MED list. This involves convincing the potential anchor firm that they are capable of offering a reliable service in supplying quality components.

Even after being appointed as vendors, the SMIs have to continuously prove their competitiveness in order to maintain their vendor status. In the case of Proton VDP, the vice-president of Hicom-DRB, Tik Mustafa, warned the Proton vendors that they may find themselves out of the automotive industry if they fail to reduce their production costs, improve their products and upgrade after sales service (New Straits Times, 15/4/96).

Even though, the VDP aims to provide the small business with secure markets, this does not mean the demand for their product is stable. This is because in a situation where the anchor firm faces low and inconsistent demand, their demand for their vendors' products is also low and inconsistent. For Ui, this means that the vendors cannot effectively plan or aim to achieve an optimum level of production. This difficulty is intensified by the fact that the products are unique to the anchors' requirements and thus cannot be marketed elsewhere.

### **Other Entrepreneurial Development Programmes**

The government efforts to nurture and enhance the development of SMI is summarised in Table 4.

Appendix 1 provides information on (a) the Industrial Technical Assistance Fund (ITAF), (b) the special loan schemes under the National Bank, and (c) the financial and credit facilities for SMIs offered by financial institutions, commercial banks and government agencies.

In addition to the above, small businesses engaged in certain promoted sectors and activities are offered manufacturing incentives such as pioneer status, investment tax allowances and export promotion support.

### **5.7 THE PLASTIC INDUSTRY**

The plastic processing industry is one of the more dynamic growth sectors. It manufactures a wide range of products from simple products such as plastic bags and

film, used mainly for packaging, to very sophisticated products such as high precision plastic electronics components. It has become one of the major supporting industries of the electronics and automotive industries, two key industrial sectors in Malaysia.

Table 4  
**SMI Development Programmes**

Issue	Programmes
Marketing	Vendor Development Programme Integrated Marketing Programme SMI Expos and Industrial Fair Sub-Contract Exchange Scheme
Technical Assistance	Industrial Technical Assistance Fund Malaysian-Japan Technomart Workshop Expert Under JICA
Finance	Industrial Technical Assistance Fund Soft Loan for Modernisation and Automation of SMIs Soft loan for Quality Enhancement of SMIs
Infrastructure	SMI Industrial Park
Information Support	Malaysian Industrial Technology Information Centre

Source: MITI

As of 1994, there were about 1,000 firms involved in plastic processing. The distribution of firms by fixed assets shows that 45% of the firms have fixed assets of less than RM500,000, 28% have fixed assets between RM500,000 to RM2,500,000 and 27% have fixed assets of more than RM2,500,000 (Chew, 1994). This indicates that majority of the firms in this sector are the small or medium sized firm.

Two major sub-sectors in the plastic industry are the plastic packaging sub-sector and the automotive, electrical and electronics parts and components sub-sectors. Others are

engineering plastic, plastic toys, plastic furniture and plastic household product sub-sectors.

#### **5.7.1      The Plastic Packaging Sub-Sector**

The plastic packaging sub-sector has existed since the 1950's and is the oldest sub-sector in the plastic industry. It continues to grow as more demand is created by the industrialisation of the country. It is now supplying the wide range of plastic materials that includes plastic bags, sheets, films and containers to various industries such as the food and pharmaceutical industries. The Malaysian Industrial Development Authority (MIDA) reported in 1993 that there are about 300 companies involved in the production of plastic packaging products and most of them are small and medium scale ventures. As the manufacturing sector is expected to maintain its annual growth of 14% the demand for plastic packaging will continue to be sustained.

#### **5.7.2      The Plastic Parts and Components Sub-sector**

The plastic parts and components sub-sector, on the other hand, is a more recent sector in Malaysia, receiving a major boost in the past 10 years as a result of the growing investment and production in the electrical, electronics, automotive and telecommunication sectors and the government emphasis on local content. Its increased usage is also promoted by the inherent lighter weight and non-corrosive properties of plastic.

Two industrial sectors in which plastic parts and components are widely used are the electronics sector and the automotive sector. The external operating context of the plastic parts and component firms serving each of these market-sectors may be different in some respects from each other because they each are highly dependent on the growth, performance and operating context of the sectors they are serving. Hence, the nature of each industry will be presented next.



**a) The plastic electrical and electronics parts and component industry**

The plastic electronics parts and components industry has been jointly promoted, partly by the growth and development of the local electronics industry. The electronics industry in Malaysia is divided into three broad sub-sectors, namely electronics components, consumer electronics and industrial electronics (see Appendix 2 (a)).

One particular sub-sector within this sector that is highly associated with the plastic parts and components industry is the consumer electronics product sector which manufactures colour TV receivers, audio products, video cassette players/recorders, mobile phones, telephone sets, personal computers, keyboards and printers. Emphasis thus will be given on this particular sub-sector in the discussion to follow.

The electronics sector is reported as the leading sector in the nation in terms of production, employment and export. In 1995, this sector contributed RM85 billion in terms of export value. Its average growth rate over the years 1991-1995 was 30.7 percent.

Out of the three categories or sub-sectors of the electronics sector the electronics components sub-sector, the consumer electronics sub-sector and the industrial electronics sub-sector, the consumer electronics sub-sector has always been the smallest contributor to the electronics sector as shown in Appendix 2(b). However, this sub-sector has been growing apace over the years. Its output value increased from RM 0.8 billion in 1986 to RM 4.6 billion in 1990 and to RM 17.9 billion in 1995.

Having recorded a high average growth rate of 30.7 percent each year since 1991, in 1996 the electronics industry grew at a moderate rate. The growth of the electronics and electrical industry over the first seven months was 10.4 percent compared to the growth rate of 23.4 percent in the same period in 1995. The lower growth rate resulted from the lower ordering rates for audio-visual products. The production of television sets, for

example, grew at the rate of only 1.2 percent over the first seven months of 1996 compared to its growth over the same period in 1995 of 25.1 percent. The lower ordering rates are the consequence of the high level of inventory in the world market and the lower demand by consumers (Malaysian Economic Review, 1997).

The growth of the electronics industry is strongly linked to the increase in the flow of foreign direct investment by MNCs as a result of an attractive investment climate, including the special 10 years pioneer status, the huge reservoir of trainable labour at low cost and the establishment of Free Trade Zones and Licenced Manufacturing Warehouse facilities. Malaysia is mainly an offshore assembly location especially for consumer electronics goods. Among these goods, audio and video have experienced the highest growth in production because of the major expansion by Japanese consumer electronics giants such as Sony, Hitachi and Matsushita and, to a lesser extent, by European, US and East Asian companies (Kok, 1994).

However, the fact that the local electronics and electrical industry is only a manufacturer of foreign brand goods requires that this industry develop further into manufacturing higher value added products. The government realising that the local electronics and electrical companies have achieved international product quality standards through their close links with MNCs, feels that the time is right to take the local industry into the next development phase which is the development of local Malaysian-owned companies, to be followed by local MNCs, by encouraging the successful local 'Original Equipment Manufacturers' (OEM) to become 'Own Brand Manufacturers' (OBM).

With regard to the electrical and electronics plastic parts and components sub-sector, its growth has been promoted by the growth of the local electronics industry, particularly the consumer electronics sub-sector. The change over the years in structure of output of the electronics industry by product category, as shown in Appendix 2 (c), from a low proportion of product from the consumer electronics category (12 percent in 1986) to a much higher proportion of this product (25.2 percent in 1995) has increased the demand

for the plastic parts industry. The government has contributed significantly to the structural changes by promoting higher value added activities.

One other important factor contributing to the growth of the plastic electronics component sub-sector is the government intervention forcing the MNCs to localise their product content. This argument is justified by the fact that, in 1986, only 25 percent of the large firms and 30 percent of the foreign joint-venture firms offered subcontracting works to local small and medium firms (Ui, 1996). Among the reasons given by the MNCs for sourcing the parts and components overseas is a lack of quality control, and shortage of qualified small firms (Fong, 1990). The high import content of the electronics industry has received the government's attention which led to the design of various policies, schemes and training programmes to promote the linkages between the manufacturer of electronics goods and the supplier of local parts and components. In 1993, study undertaken by Nazari (1993) concludes that there has been a significant occurrence of linkages between foreign electronic MNCs and local SMIs in the forms of local sourcing of component parts, tools, equipment and the awarding of sub-contract jobs (Samsinar and Yew, 1996). Promoting these forms of linkage is still an area of concern to the government as reflected in the Second Industrial Master Plan (1996-2005).

One particular government programme that plays a major role in promoting the local plastic electronics component industry is the VDP. In 1992, the 'Electrical and Electronics Component Scheme' was introduced in the consumer electronics sub-sector with Sapura and Sharp as anchor companies. A few other MNCs such as Matsushita, Sony and Hitachi later joined the programme. However, since the VDP is heavily focused on developing 'Bumiputra' small businesses, the programme thus impacts on these businesses differently depending on the eligibility status of the firm. As voiced by one of the key informants of this study, the VDP has had an adverse effect on his firm since his market share was taken by another 'bumiputra' firm.

The move toward developing the OBM by the Malaysian government is another factor that is projected to bring better prospects to the local plastic electronics component sub-

sector. Furthermore, with the advancement of the era of information technology and multimedia (IMP2, 1996), the demand in the plastic electronics component sector is expected to increase.

#### **b) The automotive plastic parts and component sub-sector**

Development of the automotive plastic components sub-sector has been promoted by the growth of the Malaysian automotive industry and by the government's local content programme.

The major attempt to develop the Malaysian automotive industry took place in 1993 when Proton was launched to manufacture cars rather than assemble them locally, as had been done previously. The establishment of Proton is also meant to be a major push to the local automotive part and component industry since two of its objectives have been stated as (1) to be the anchor for the development of the local components industries and (2) to promote greater utilisation of local components (Kok, 1994). It was reported that at the initial stage of production, Proton's local content was 18 percent but by 1991 it was around 69 percent and the percentage has since increased to 80 percent in 1996.

Proton, however, experienced a very bad start-up. In 1995/1996, sales totalled only 16,600 units, far smaller than its targeted sales of 80,000 units. In the first four years of operation, the losses accumulated to RM400 million. But from 1989 onwards, partly due to the new management team and the economic upturn, Proton began to report profits. In 1992, output totalled 103,200 units.

In addition to Proton, there are eight assemblers producing 15 makes of passenger cars and 19 makes of commercial vehicles within Malaysia. In 1995, the total output of these assemblers was about 60,000 units and the production of passenger vehicles grew from 33,685 units in 1987 to 248,193 units in 1995 (IMP2, 1996).

Another factor contributing to the growth of the local automotive component industry is the government local content policy. It started in 1980 with the Mandatory Deletion Programme. Further action was taken in 1992 when the government set progressive local content target ratios for car assemblers for the next four years. The target ratio for 1993 was 40%, for 1994 50%, for 1995 55% and for 1996 60%. Assemblers are penalised for not achieving targets.

Finally, one other factor which plays a major role in promoting the local automotive component industry is again the Vendor Development Programme (VDP) (see section 5.6). Indeed, VDP was first launched in 1988 with Proton as the pioneering anchor firm.

Reports show that the local automotive component parts and accessories industry has recorded a rapid growth with the output level growing from only RM420 million in 1990 to RM1.2 billion in 1995 (IMP2, 1996). According to IMP2 (1996), Proton alone has created more than 134 component manufacturers supplying about 3,000 components.

### **5.7.3 The Nature of the Market**

The highly differentiated products result in a variety of markets. End products are usually sold to wholesalers and retailers while packaging and component products manufacturers can become vendors or subcontractors.

#### **a) Subcontractor and vendor**

Becoming subcontractors or vendors are the most common modes of marketing plastic products, especially plastic parts and components.

Ui (1996: 20) drawing on Andy Seo (1992) has defined subcontracting as “the business activities involving manufacturing, processing, assembling, testing, packing and any other operations of part, components or parts thereof, sub assemblies and final assemblies being contracted to outside enterprises, mainly SMIs, with the contract

giving party supporting in full or partially the raw materials, equipment, technical expertise and support to the contract receiving party in completing the desired task”.

In the plastic sub-sector, the variation of the subcontracting contracts and activities ranges from the situation whereby the customer provides the subcontractor with the moulds, raw materials and training, to the situation where the customer provides nothing except the product specification and perhaps the quality control guide (owner-manager, 1996: Yahaya, 1995).

Consistent with their normal usage among the small businesses in this study, the term ‘subcontractor’ is used to refer to the manufacturer under the former subcontracting arrangement while the term ‘vendor’ is used to refer to the manufacturer under the latter sub-contracting arrangement.

#### **b) Product pricing and costing**

Insight from owner-managers shows that the pricing and costing of the plastic parts and components is unique to this sub-sector but standardised among the firms in the sub-sector. It is normal for customers to provide the firm with a standard format and cost breakdown form.

The cost for each product is broken down into the following components:

- 1) material cost
- 2) purchase part cost
- 3) manufacturing cost
- 4) transportation charge
- 5) administrative charge
- 6) tooling cost
- 7) profit

The manufacturing cost is broken down into costs of each process involved. A particular part, for example, involved seven processes in the following order: stamping

using a 63 tonnage machine, stamping using a 40 tonnage machine, injection using a 120 tonnage machine and finally stamping using a 16 tonnage machine. The cost of each process is derived based on the cycle time and the machine charge per hour. The machine charge per hour is the difficult element in the pricing. Whilst evidence from interviews with several owner-managers showed that most firms have a fixed range of maximum and minimum charges for each type of machine, which they claim to be a competitive rate, theoretically as specified by a cost breakdown format of one of the customers, the charge per hour should be determined as follows:

$$\text{Charge/hr} = \text{Labour Cost} + \text{Machine Depreciation cost} + \text{Machine Maintenance Cost} + \text{Machine Area Rent} + \text{Machine Insurance Cost} + \text{Utilities} + \text{Other cost}.$$

A key informant claims that there is ample room for manipulation in the charge per hour calculation. In many cases it is determined by market forces. In other cases the customer, wanting to award a job to a particular vendor, requests the vendor to lower the machine rate to be more competitive.

The administrative charge and the profit are normally charged at a certain percentage of the sum of the material cost, purchase part cost and manufacturing cost.

The tooling cost is another illusionary cost element. The cost is calculated by adding the cost for the mould, jig, gauge, packing, texturing and testing and then dividing the sum by the number of projected units of production. The projected unit of production is normally given by the customer but there is no guarantee that the actual purchase will match that figure.

## **5.8 SUMMARY**

In summary it has been the intention of this chapter to continue the bootstrapping process by laying down insights on the external operating context of the small businesses under study; the Malaysian small businesses operating in the plastic sub-sector. The chapter thus reviews the key background information of Malaysia, her

economic performance, the key government policies, the development and significance of the manufacturing sectors, the Small and Medium Industry and the plastic sub-sector.

The insights from this chapter together with the sub-frameworks build in Chapter 3 enable the analysis of the case study to be undertaken in the next chapter to follow.



# CHAPTER SIX

## CHAPTER SIX

### THE ANALYSIS AND FINDINGS

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#### 6.1 INTRODUCTION

The analysis and findings of this research study take the form of a case study presentation and analysis. The presentation of each case will be divided into two sections; (A) The Unfolding Operating and Strategic Context; (B) Analysis and Findings: Financial Management Approach in Investment Decision-Making; (C) Analysis and Findings: Financial Management Approach in Financing Decision-Making.

Section A will consist of three sub-sections as follows:

I) *Background of the firm*

This sub-section will present brief information about the firm with regards to the year it was formed, the ownership structure, its owner-manager/managers background knowledge and experience, its sales achievement over the years 1994 to 1996 and its current operation in terms of the number of employees, the customer-base and the product-base. Some information has been disguised in order to protect the true identity of the firm but changes were carefully made in order not to materially distort the analysis and findings of the study.

II) *Overview of the strategic development of the firm*

This sub-section will present the firms development with regards to its processes, products and markets that has taken place over the years since the firm commenced its operation. It will demonstrate how the internal change has come about in terms of the firm's pro-action or reaction (reactive response) to an unfolding external environment discussed in chapter 5. The aim here is to address criticism within the literature which

emphasises weaknesses within small business research whereby a selected area of research focus is isolated, taken out of the total context of the small firm under investigation and then analysed out of context- with no due regard for the wider contextual issues or forces which may have impacting relevance on that area of the firm isolated for analytical attention. The emphasis within this study, therefore, is the provision of a wider strategic development context which provides the developmental parameters of the case firm within which critical incidents for analysis can be identified and 'contextualised'.

### III) *Internal Operating Environment*

This sub-section will present the prevailing characteristics of the firm and its owner-manager/managers with reference to the partial conceptual framework developed in chapter 3.

**Section B and C** will each consist of three sub-sections as follows;

#### I) *The Nature of the Financial Management Approach*

This sub-section adopts a *critical incident* analysis approach. It will examine the decision-making processes and the reasoning behind the decisions in order to analyse and describe the financial management approaches adopted by the firm in relation to a particular investment project undertaken in the year 1996, the year preceding the field-study. Since the research aims at depth of understanding with regard to the 'hows', 'whys' and 'whats' of the financial decision-making, the discussion will include the combination of the owner-manager's formal interview responses, anecdotal statements and authors interpretations. For each incident of financial decision-making selected, analysis will be carried out on the purpose, motive, rationale and calculation to identify the existence of financial motive, financial criterion, tools and techniques and other non-financial influential factors in order to provide depth of insight into the financial management approach adopted.

## *II) The Extent of Traditional Financial Management Application*

In this section, further analysis on the emerging financial management approach will be undertaken using the framework developed in section 3.2 of this thesis to reveal the extent to which the concepts, tools and techniques utilised in the decision-making match or mismatch those as portrayed by the traditional financial management.

Finally, the nature of the departure of the financial management approach adopted compared to the traditional approach will be analysed in light of the strengths and weaknesses of the approach as related to the operating context of the decision-making. To this extent case study analysis underpinning the research is founded upon the testing of existing theory, concept and vehicles. Financial management theory, concepts and vehicles serve as comparative frames to facilitate this area of analysis.

## *III) Factors Impacting on the Financial Management Approach*

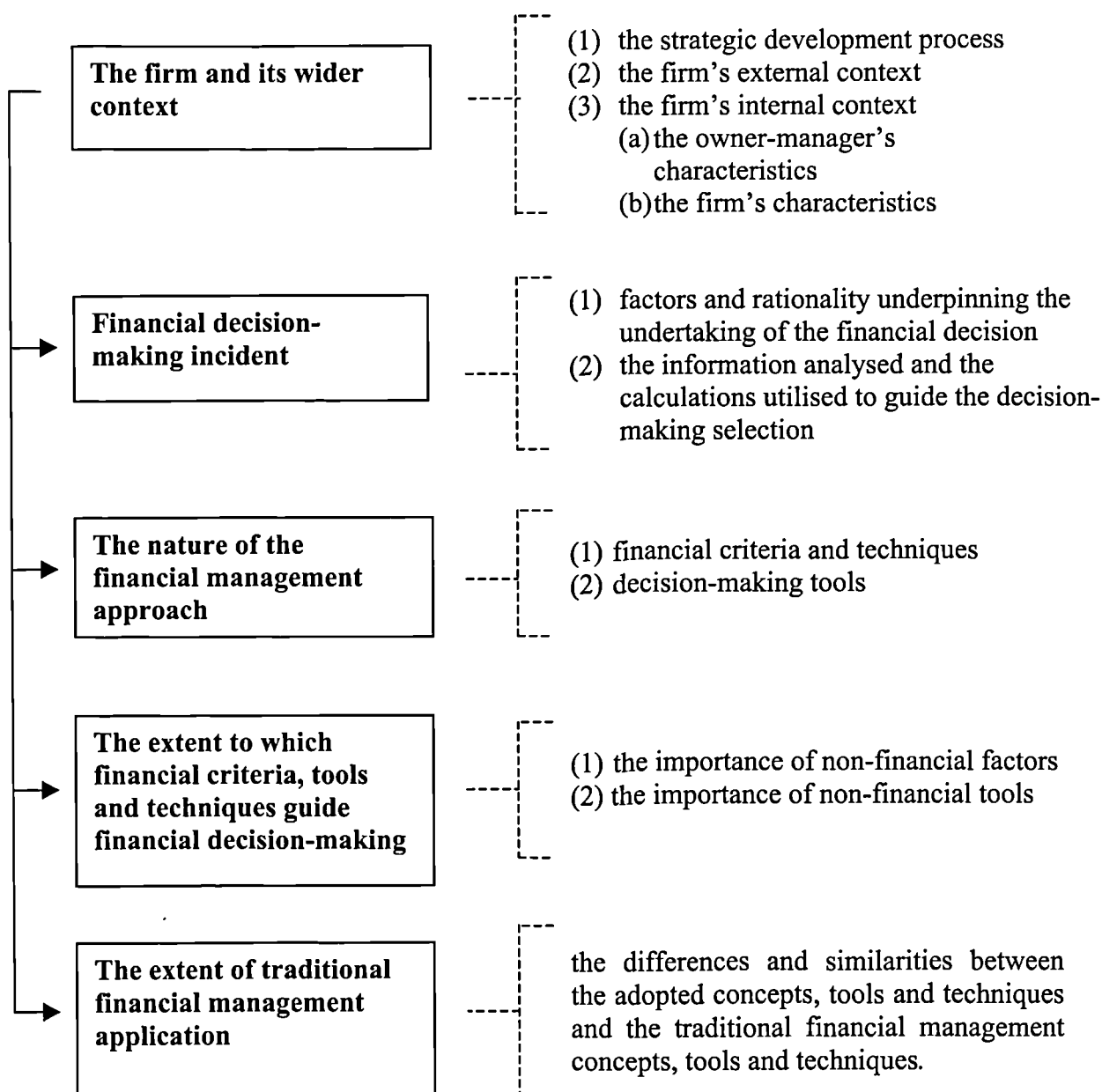
In this section, the factors that explain why a particular financial management approach was adopted are analysed. These factors also help in explaining the presence of the gap between the practised approach and traditional financial management. These factors are derived from both the owner-manager's perspective and the author's analysis of the underlying forces. Insight from the 'partial framework' informing this study is incorporated to guide the author's analysis.

Since each critical incident is 'contextualised' by considering it within the total strategic development context of the firm it is possible to highlight those factors impacting on the financial management approach in terms of the owner-manager's motives, the various dimensions of decision-making rationality which influence the underlying decision-making processes and key external context change forces against which the financial management approaches unfold.

The framework for analysing each case study is summarised in Figure 5

**Figure 5**

**The Framework for Analysing the Case Study**



A multi-level approach to analysis is the integrating mechanism which brings cohesion to the above framework:

(1) the wider context of the case study firm's external operating environment provides a 'vertical dimension' (Pettigrew, 1985) to the analysis. Key socio-economic forces and their changing nature (external change processes) are described to provide contextualisation of that part of the analysis which focuses upon the inner firm-identification of the impacting form of key external forces on internal developmental activity and behaviour.

(2) focus upon the overall unfolding strategic development processes of the case firms and the behavioural and decision-making processes associated with the firms' financial decision-making incidents in the context of identified key internal change incidents provides an 'horizontal dimension' (Pettigrew, 1985) to the analysis.

(3) consideration of any interconnectedness between the vertical and horizontal dimensions provides the total context of the analysis.

(4) financial decision-making incidents are analysed utilising decision-making theory and traditional financial management knowledge-base as comparative frames of reference to attempt to derive understanding of actual financial management approaches adopted – and the relevance and impacting nature of external and internal factors on the ultimate nature of financial management approaches adopted by the small firm.

## **6.2      CASE 1 : APLAS LTD. (APLAS)**

### **(A)      The Unfolding Operating and Strategic Context**

#### **I.        Background of the Firm**

APLAS is a small plastic company incorporated in June 1996 by three 'Bumiputra' shareholders. It is managed by its major shareholder (the 'owner-manager') whose background is in engineering. By December 1996, six months after it commenced its operation, the firm had already recorded a turnover of RM540,000 and increased its number of employees from 5 at the start of the operation to 35. Also by then, a new shareholder was invited to join the firm as a minority shareholder and as the firm's accountant. The firm is currently manufacturing plastic electronic parts, engineering parts, electrical casings, telecommunication casings, toiletry products, plastic consumer products and packaging containers.

#### **II.      Overview of the Strategic Development of the Firm**

Commencing with two injection moulding machines and 5 employees, APLAS began its operation manufacturing plastic consumer products and packaging containers. Rather than looking for opportunity in the Vendor Development Program (VDP), APLAS marketed its products on the open-market. The VDP which is supposed to be one of the firm's external 'enabling' forces due to the firm's 'bumiputra' status, was perceived by the owners as unattractive because of the 'high competition' among other 'bumiputra' firms, the heavy reliance on a few customers, the restriction imposed by the anchor company and the involvement of too much 'red tape' and 'politics' in the process of obtaining the vendor status. APLAS thus started the business by manufacturing and selling packaging products on a contract basis direct to several small customers and by manufacturing consumer products and selling them directly to wholesalers. With the small scale of operation, customers were mainly small and medium size enterprises (SMEs).

Three months later, after having proved that satisfactory levels of demand existed in its market, an additional three machines were purchased followed by a further two machines two months later. With these acquisitions the firm upgraded its production facility by adding greater tonnage machines than were currently available and a blow-moulding machine. The expansion was a reaction to the increase in the demand for existing products from the firm's existing and potential customers, the current and potential opportunities in the electronic and telecommunication sectors for subcontracting jobs involving bigger plastic parts and the high potential demand for the blow moulding products from the food and pharmaceutical sub-sectors due to the growth that has been taking place in all these sub-sectors.

The expansion enabled the firm to extend its product range to include plastic electronic parts, engineering parts, electrical casings, telecommunication casings and toiletry products. This also marked a shift in its customer-base from a heavy reliance on SMEs to an almost even distribution between SMEs and large established corporations. Its customers are also distributed among various industrial sectors, namely the pharmaceutical industry, the hotel industry, the food industry and the electrical industry.

By the end of 1996, the firm was employing 35 workers and had accumulated a turnover of RM540,000 and a paid-up capital of RM500,000. The ownership structure had also changed with the inclusion of the firm's newly appointed accountant as the minor shareholder.

### **III. The Internal Operating Environment**

The firm has four shareholders with the major share portion held by the managing director (to be referred to as the owner-manager) who is actively managing the firm. He owned 40 percent of the shares, heads the marketing and production functions and is responsible for the strategic development of the firm. The second shareholder who has a 30 percent share of the firm does not participate in the day to day management of the firm but is involved in managing another business, a food processing business, also owned by him. The third shareholder is the owner-manager's wife. She owns 25 percent



of the firm's share and is the firm's quality controller. The last shareholder is the firm's accountant who joined the firm six months after the firm was formed and was offered the opportunity to purchase five percent of the ownership stakes.

**a) The Owner-Manager's Characteristics**

Being the only owner who is actively managing the firm, the owner-manager's characteristics form a pivotal part of the internal operating environment of APLAS.

The owner-manager has more than fifteen years involvement in plastic injection moulding industry. Starting as a factory supervisor in a Japanese firm, he then took the opportunity offered by his employer to acquire an industrial training in Japan. This was then followed by several years working **experience** on the production side and middle level management of several large local corporations and multinational firms. With this depth of experience, the owner-manager can be regarded as a highly competent person on the technical side of the injection moulding industry. He also claimed that his working experience provides him with **linkages** with large business organisations including several overseas firms.

The owner-manager also claimed that he has some experience with small and medium industry through his involvement in the advisory committee of several business associations whose members are SMEs. According to him, his **involvement with SMEs** exposed him to some aspects of financial management. However, further enquiry revealed that he was actually referring to the accounting and financing aspect and not the financial management aspect as defined in the context of this study. Therefore it can be said that the owner-manager has a very limited **financial management knowledge-base** and he admitted that he is incompetent in using textbook tools and techniques.

The owner-manager's **desires and goals** for running the business can be said to be a mix of profit growth and independence. He claimed that his goal is growth in profit, not in sales, and to support this he recalled cases in which he rejected the contracts offered to him just because they did not give sufficient profit. In addition to this goal, being

independent and running his own show also seems to be his inspiration. This is reflected in his anxiousness in discussing his styles of management and the kind of organisation culture and environment he is imposing on the firm. His comment on his reluctance to join the VDP because of the restrictions imposed by the anchor company on the vendor's management reflects further his desire for independence and control.

The owner-manager admitted that he is not a high **risk-taker** in the sense that he would only venture into something that he is confident of. This is also reflected in the move he made before venturing into APLAS. He resigned from a high paid post as a production manager but did not immediately set up his manufacturing company. Instead, he worked as a part time business consultant for six months. In that period, he undertook all the necessary preparation for running his own plastics company, including finding the market and identifying the appropriate machines and reliable material suppliers. This was to ensure to some degree that once the firm begins its operation, everything would run smoothly.

The owner-manager also demonstrated a high level of **strategic awareness** in his discussion on the opportunities and threats in the firm's external environment. He described the external environment as 'ever changing' and this to him would require him to become alert to what is happening in his environment, or in another words, to closely monitor the environment. In addition to keeping in touch with the daily business and economic news, the environment is monitored by regular contact with his existing and potential customers.

Finally, despite not having much background knowledge on financial management, he seems to show a high level of **appreciation** of the value and benefit of financial management. His statement: "*business is all about money . . . I want my workers to know that everything is dollar and cent . . . I will make sure that there is no white elephant in my factory*" (APLAS, 1996: Response 1) implies the importance placed on managing the firm's financial resources. He also emphasised this by explaining "*my accountant is a valuable asset to me and to ensure his commitment I offered him a stake in this company*" (APLAS, 1996: Response 2).

## b) The Firm's Characteristics

APLAS has a formal **management structure** with three members of personnel in the top management and two clerks. The top management consists of the production and marketing manager who is the owner-manager himself, the quality control manager and the accountant who is the minor shareholder. According to the owner-manager, the formal structure is very important for small businesses that are dealing with large companies as this reflects the firms' image. Importantly this also seems to result from his background of working in large corporations.

Despite the clearly defined management functions, the owner-manager is the only one responsible for initiating the **strategic activities** of the firm (such as initiating the ideas of expanding the firm's target market, buying new machinery or producing a new product) and deciding on important routine decisions (such as deciding on the amount of materials to order and extending any particular customer credit period). The functional managers' jobs are to implement whatever operational tasks have been decided and to furnish the owner-manager with relevant information. Since the owner-manager is also the production and marketing manager, he is in fact responsible for the bulk of activity when it comes to strategic decision-making and actions. Even though he initiates strategic decisions, the decisions to proceed are decided among all the shareholders.

Further insight on the owner-manager's strategic awareness characteristics indicates that the firm's **strategic development process** is characterised not by a long-term rational planning mode of management, but rather by incremental reactions adjustment in response to its understanding of opportunities embedded in the fast growth of key industry sub-sectors within this context. However, the owner-manager undertook conscious networking activities with customers and utilised the daily press to facilitate ongoing learning about the key change issues as they unfolded.

The owner-manager's reluctance to join the VDP has to some extent exposed the firm to a high degree of **uncertainty** since it has to market all its products in the open-market. However, to the owner-manager the firm is facing very little risk or uncertainty. This is due to the uncertainty being off-set by the owner-manager's effort and ability (partly through his existing linkages) in finding customers, by manufacturing and selling on a contract basis (through purchasing contract arrangements) and by diversifying its product range and also customer-base so that the firm is not relying heavily on any particular customer or even any particular market sector (for example, the electronic sector only).

With the presence of a full-time accountant with a diploma in accountancy and several years working experience, the firm has a specialist in the area of **accounting**. Thus the firm can be said to be well equipped with knowledge on traditional capital budgeting and working capital management tools. Conversation with the accountant, however, shows that he only has a **basic knowledge** on the NPV and IRR tools and has no practical experience with using any of the tools. Thus, the firm can be said to have no specialist in the area of financial management.

The owner-manager claims that the firm does not face many **financing problems** because it has access to borrowed funds, but he is reluctant to borrow because of the high costs charged by commercial banks. The firm, however, does not have easy excess to cheap loans because its non-vendor status results in it being given less priority in the available government schemes.

**(B) Analysis and Findings: Financial Management Approach in Capital Expenditure Decision-Making**

A major capital investment made by the firm in 1996 involved the purchase of two injection moulding machines, worth RM400,000, five months after the firm commenced operation. These machines are similar to the existing machines except that they are greater tonnage machines, which can manufacture bigger plastic products. Eighty percent of the machine cost is financed using hire purchase (HP) financing with a commercial bank.

## **I. The Nature of the Financial Management Approach**

The decision-making involving the purchase of additional injection moulding machines was done in an informal manner. There is no written investment proposal and no stated objective of what is to be achieved from the decision making. Other than the alternative of not making the investment, no other alternative has been considered.

The reason for undertaking the investment is as follows:

*“These machines can produce larger-size products that cannot be manufactured by the existing machines. From each larger product we can make more profit and furthermore we can save more on the operating cost, and there is a high demand for larger plastics components by our existing customers and by other potential customers who I had approached and, indeed, a few such customers had already offered me big orders to be dispatched in the next two months.. so the purchase of these machines enable us to serve the demand and give us the opportunity of making more profit.”*  
(APLAS, 1996: Response 3).

A simple ‘back of an envelope’ calculation was carried out by the owner-manager. Regarding what is actually calculated or analysed, the owner-manager claimed:

*“I estimated how much it costs us to purchase the machine. I then calculated that a product of this size could give us about 25 percent profit, which is higher than what we get from smaller products. The price will allow only a certain percentage of profit on paper, usually 10 percent but we know that we can save some of the costs. Then I estimated the actual profit we can earn from each unit of new product and how much profit we could actually generate each month from the additional machines thereby ensuring that we could be making profit for ourselves after about two and a half years.”* (APLAS, 1996: Response 4)

Response 3 infers that the decision to undertake the investment was due to the following factors:

- the high profit margin of 'large' plastic products
- the existence of demand from existing and potential customers for large products
- the big potential market for larger plastic products

'Product profitability' can thus be said as one of the main criteria for choosing to undertake the investment. The earlier part of Response 4 indicates that the traditional accounting product profit margin was utilised as the tool to measure the profitability criterion and the technique involves comparing the profit margin of the new product to that of the firm's existing product.

In addition to the profitability criterion, tool and technique, the assertion, "*we could be making profit for ourselves after about two and a half years*" in Response 4 infers the utilisation of some kind of *payback* calculation, but the use of the term 'actual profit' instead of 'cash flow' gives an indication of either the 'payback period' being different from the traditional financial management payback period or that there is some error in the calculation of this payback period.

Further explanation by the owner-manager in response to the prompt on how 'actual profit' is estimated (Response 5) reveals, however, that what he referred to as the 'actual profit' in the previous statement does not account for depreciation expense, other fixed expense, interest expense and tax, which means that the owner-manager's conceptualisation of profit in the above statement is not the same as accounting profit but resembles the traditional financial management *annual cash flow*.

*"I calculated how much money I can actually earn from a product by estimating how much money we actually spend to manufacture such a product, things like the material cost, the labour cost and the utility cost. For this reason, I think costing and pricing are very important matters, and engineers know this better. . . I then multiply the actual profit with the number of units the machine can produce."* (APLAS, 1996: Response 5)

To detect the possible influence of interest on the payback period calculation, the question was later posed by the author: “Did you take into consideration the interest cost anywhere in your analysis?”.

The answer given clearly stated that total *interest payment* was added to the investment cost.

With the use of cash flows underpinning the claim, ‘*we could be making profit for ourselves after about two and a half years*’ in Response 4, it can be concluded that some form of payback technique was utilised to guide the decision-making. This assertion more importantly implies that ‘the ability to make profit’ is an important factor influencing the decision to undertake the investment. The ‘profit’ in this context though is not similar to accounting profit but refers to the excess of inflow over outflow. Hence, this factor is better referred to as the ‘net cash flow’ criterion.

The explanation in Response 5 also indicates that the machine capacity was utilised as a proxy for expected turnover. The owner-manager admitted that 90 percent machine capacity was assumed.

Responding to the prompt on why 90 percent capacity was assumed, he answered that:

*“The market is there but a new company like us may not be able to get them, that is why we only buy two machines to start with, we want to fully utilise them, to be on the safe side we assume something like 90 percent capacity as opposed to full capacity. That means we have got to achieve a certain amount of sales a month from the machines.”* (APLAS, 1996: Response 6)

It can be said that in the perception of the owner-manager the 90 percent capacity assumption is a more *conservative* estimate of the investment’s turnover, of which the owner-manager was highly *confident* of achieving. The high confidence is associated with the number of machines or the amount of money invested because, by investing in only two machines, the owner-manager *feels* that he is trying to capture only a small portion of the product market.

Thus *risk* of the firm has been minimised from the very beginning by considering only two machines instead of more so that, according to the owner-manager, the firm can achieve the 90 percent machine capacity with little uncertainty. This is supported by his comment on the level of risk associated with the investment as being ‘very minimum’. The risk is accessed *subjectively* based on the owner-manager’s interface with the customer and *gut feel* on the future demand for ‘bigger’ plastic products.

Response 6 implies that the 90 percent machine capacity was then used to determine the sales target which is to be generated from the new machine. With this, the new investment can be seen as acting as a push to the firm to achieve the sales target. This is further revealed in the following statement:

*“The risk is very minimum.. some orders are already in hand and if sales are difficult we have got to work hard to find more.. we may consider revising the target by relaxing the time to recover to three years, it is still not bad for us.”*  
(APLAS, 1996: Response 7)

The above assertion infers that *risk* is further removed by having a ready demand for the product. In addition to this, the minimum risk is incorporated into the decision-making analysis by utilising a range of acceptable payback periods to set new targets.

Finally, the following assertion, though was meant by the owner-manager to explain the reason for bank borrowing, can be used to indicate that some kind of *rate of return* was utilised as an investment criterion and was compared to the interest rate on the financing instrument utilised to finance the asset.

*“Borrowing from the bank is okay to us because the asset can be used to generate profit more than the interest cost.”* (APLAS, 1996: Response 8).

A question was raised by the author as to how the owner-manager knew that the asset would generate profit above the interest cost. The answer given indicates that the percentage ratio of annual profit from the total investment was used to inform the return from the investment, which is then compared with the interest rate.



### ***Summary of the financial management approach***

In short, the presence of financial criteria infers that some form of financial management approach has been utilised in the investment decision-making. The financial management approach appears to possess the following characteristics:

- a) Utilises the product profitability, payback, 'net cash flow' and 'return on investment' criteria to judge the desirability of the investment;
- b) Utilises the 'product profit margin' calculation as the tool to measure the profit criterion and utilise the following calculation of cash flows to measure the payback and 'net cash flow' criteria:

1. Cash flow per unit = price – material cost - labour cost – utility cost
2. Monthly cash flow = target sales based on percentage of production capacity x cash flow per unit
3. Initial outlay = investment cost + total interest
4. Payback period = Initial outlay/monthly cash flow

- c) Incorporates risk and uncertainty in the calculation by (i) using a conservative estimate of turnover and (iii) calculating a new sales target that would enable the firm to payback within a certain time period using the following calculation:

If APLAS wants to breakeven in 3 years,  
target sales in three years = Initial Outlay / cash flow per unit

- d) Utilises the percentage of annual profit from the total investment to measure the 'return from investment' criterion, and comparison between this value and the interest rate on the utilised financing instrument is involved.

- d) Being underpinned by both the market orientation and the production orientation philosophy – The decision-making was to some extent based on some analysis of customer demand/market share but the ultimate decision to invest in the machinery was underpinned by the assumption that the firm can sell 90 percent of the production capacity which is based on (a) the firm's capability to produce such an output level (b) 'gut feel' about the market (based partly on his past experience and partly on existing customer relationships) and (c) that if we don't make sufficient sales we will have to 'push-sell' harder.

The financial management approach adopted in this investment decision-making incident can be argued as playing a major role in guiding the decision-making selection since no qualitative factor other than those input into the financial management approach (for example, the owner-manager's gut feel about the market and confidence of the firm's capability to achieve the level of sales assumed) can be argued to have any significant influence on the decision to undertake the investment. This conclusion does not dismiss the significance of the owner-manager's judgement and gut feel that input into the financial management approach.

## **II. The Extent of Traditional Financial Management Application**

The financial management approach adopted in the investment decision-making reflects the utilisation of some traditional/normative financial management concepts, tools and techniques and other techniques as well.

Firstly it reflects the utilisation of a criterion and tool which resembles the traditional financial management *payback* criterion and tool as analysed earlier. Some gap however exists between the payback tool utilised by the firm and that of the traditional financial management. The nature of the gap is as follows:

- The *calculation* of monthly cash flow (see Response 3) was made using a different approach to that suggested in the majority of the main financial management texts (for

example, Brealey and Myers, 1995 and Keown et al., 1993). Monthly cash flow was calculated by multiplying the cash flow per unit based on a 'marginal costing' approach by the volume of monthly turnover instead of determining the monthly cash flow directly by subtracting monthly outflows from monthly inflows, as normally illustrated in the main financial management texts. Since the calculation is based on the 'marginal costing' concept instead of 'absorption costing', the tool gives an accurate measure of incremental monthly cash flow and a somewhat similar figure to the figure derived using the prescribed approach, except in the event where the firm's cash overhead cost is also affected by choosing any of the alternative actions. In such a circumstance, incremental cash overhead cost should be added to the sum that was calculated using the 'cash flow per unit' information.

- The monthly cash flow calculation does not take into account the *effect of tax*, whilst the traditional financial management cash flow is the after-tax cash flow.
- The initial outlay (IO) took into consideration the amount of *interest* while the traditional initial outlay excludes interest cost.
- The payback period calculation was also used to calculate the volume of sales needed to be achieved if the firm wants to recover its investment in a certain period of time, an application of payback not suggested in the financial management literature.

Secondly, whilst the normatively superior criterion (also a tool and technique), the NPV, was not used, the 'net cash flow' criterion, a criterion not belonging to traditional financial management, appears as important in the decision-making. However, this criterion whilst being different from the accounting profit, appears to resemble the NPV criterion in all aspects except for not discounting the cash flows. Under the 'net cash flow' technique, the project is accepted if its inflows exceed outflows or if the net of outflow from inflows is positive. The payback period tool automatically reflects on this criterion, and thus no other tool or calculation is needed.

Thirdly, the utilisation of the financial management approach described above indicates that some importance has been placed on the cash flow, time, risk and wealth concepts. The inclusion of interest cost in the initial outlay, however, distorts the owner-manager's appreciation of the cash flow concept but this is done because the risk of not incorporating the financing implication is felt to be more important.

A minimal owner-manager's appreciation of the 'time' concept can be concluded from this decision-making incident in terms of the owner-manager's preference for a short payback period and the non-utilisation of discounted cash flows.

The 'net cash flow' criterion can be argued to reflect the owner-manager's appreciation of the 'wealth' concept. The project that has a positive net cash flow is visualised as contributing wealth to the firm. To be more precise the 'wealth' concept emphasised by the owner-manager is different from that of the traditional financial management because cash flows were not adjusted for the time value of money.

The technique of comparing the 'return from investment' with the interest rate shares some similarity with the *IRR technique*, a traditional financial management capital budgeting technique. It is based on a similar 'idea' which is the comparison between the rate of return from investment and the cost of financing the investment to evaluate whether the investment will provide the firm with net profit after taken financing cost into consideration. Their difference lies in the measure of investment return and financing cost used in the analysis. While the IRR technique has its theoretical underpinning in the use of the internal rate of return (IRR) and weighted cost of capital (WACC), the owner-manager used 'profit/investment cost' as his own conceptualisation of the 'return from investment' and interest rate as his conceptualisation of the financing cost.

With regard to above discussion, it can be said that the traditional 'cost of capital' concept has been utilised but the tool used to operationalise the concept differs in the following manner: 1) cost of equity is not taking into consideration, 2) the tax

implication is not incorporated- however, considering the firm is enjoying pioneer status, this difference can be ignored.

The calculation of the 'return from investment' by dividing the profit by the investment cost also seems to match with *AROR* criterion, except that the total investment cost is used instead of the average investment cost. This conceptualisation of return from investment ignores the 'time value of money' and the 'cash flow' concepts.

With regard to the 'risk' concept, several other indications show the importance placed on it. One indication is the use of a 90 percent capacity assumption as a more *conservative estimate* of turnover. Another indication is the use of the payback period tool to make sure that the firm is only exposed to the risk for a certain period. The other indication is the use of a range of acceptable payback periods to reflect on the possibility of a variation in the demand for the new product.

There are some similarities and some differences between the techniques of incorporating risk adopted by APLAS and that of the traditional financial management techniques. Firstly, the conservative turnover value is used instead of the expected value. The conservative value concept, however, resembles the *risk adjusted cash flows* in the 'certainty equivalent technique' (refer section 3.3.2). The clear difference is in terms of how the adjusted cash flows are derived. APLAS did not base its conservative value on any turnover distribution or on any objective expected value calculation but on a more subjective assessment of the market and the ability of the firm to capture the market; or in other words it is a *simple risk-adjustment technique* based on the *intuitive adjustment* to the cash flows (Ho and Pike, 1991). To some extent, the traditional certainty equivalent technique and expected value technique also involve some element of 'subjectivity' but the subjectivity elements are translated into objective measures to produce objective estimates. Secondly, while the superior technique of incorporating risk in a capital budgeting analysis according to traditional financial management, is the 'risk-adjusted discount rate technique', nothing similar to this has been applied in the case firm.

Finally, the financial management approach adopted by APLAS in this investment decision-making reflects on the existence of the ‘built-in’ controlling function not stressed in the traditional financial management literature. What this means is that once the decision to invest is undertaken, a sales target is automatically set as a controlling device. The sales target may be changed but within certain acceptable value limits to ascertain a maximum payback period.

### ***The Strengths and Weaknesses of the Adopted Financial Management Approach***

Given that the financial management approach adopted by APLAS deviates from traditional/normative financial management, specifically because of the non-utilisation of the NPV technique, the approach can be associated with many weaknesses which had been well documented in the financial management literature as discussed in the conceptual framework of this study. However, given the context within which the firm is operating, some potential advantages or strengths in the approach should be acknowledged and discussed. They are as follows:

#### ***1. Incorporating the financing implication***

The inclusion of total interest incurred in the initial outlay (IO) calculation seems to be more ‘appropriate’ rather than excluding it as in the traditional payback approach because the interest costs represent part of the costs incurred by the firm in making the investment.

However, the above approach can be criticised for a conceptual weakness with regard to the concepts of cash flow and payback period. If the firm hire purchases its equipment, then the IO does not amount to the total cost plus interest because this amount of money is not actually incurred at the inception of the business. Similarly, taking into account the implication of this financing, the periodic loan repayment has to be deducted from other inflows to derive the periodic cash flow (CF) as in the way periodic cash flow is calculated in the residual net present value method (see McMahon, 1991). But as a consequence of this, the payback period will represent the length of period taken to

recover part of the cost that is self-financed together with the loan repayments in the payback period only, while neglecting the obligation to pay the outstanding borrowing and interest after the payback period. Thus, the inclusion of the effect of financing in the payback period technique will mislead the firm and instead of limiting the risk of the firm it may expose the firm to more risk by ignoring the capability of the firm to fulfil the loan obligation. Table 7 illustrates the forgoing arguments.

The above discussion and the illustration in Table 5 indicate the existence of disagreement between the payback approaches and the cash flow concept, which results from the payback tool not taking into consideration all the cash flows in the life of the project. These can also be related to the problem of ambiguity of what is regarded as the 'initial outlay' in the payback tool, which is one of the major weaknesses of the technique highlighted by Lumby (1994).

Based on the illustration and the above weaknesses of the traditional payback period, it can be argued that the approach adopted by APLAS (Approach B in Table 5) is the more appropriate approach of the three approaches to calculating payback period. It modified the cash flow calculation by being more conservative to consider all the cost and interest charges as the initial outlay thus making sure that they are all taken care of before the firm can be considered 'fully recovered'. In the context of this decision-making whereby investment action is closely linked to financing action, the strength of this tool relative to the traditional payback tool lies in it taking into consideration the financing cost in a conservative manner and thus is a much safer measure to rely on.

Yet, it is argued that the calculation of cash flows, both IO and periodic CF should take into account the actual financing implication in terms of both the timing and the amount of cash flows. This, however, means that the payback period is not a good technique to analyse the capital budgeting decision in situations where investment and financing decisions are interdependent. This probably explains why the 'modified payback technique' which accommodates the financing implication using a similar concept to the 'residual net present value' method, if ever been suggested, is not being discussed in the contemporary literature (see section 3.4.5 of this thesis). In this respect the

discounted payback tool stands as a better payback tool for it incorporates the financing implication without distorting the 'cash flow' concept.

Table 5

**The Illustration of the incorporation of financing effect in payback period calculation.**

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An investment costs RM400,000 of which 80 percent is financed by a four years hire purchase financing with the annual instalment of RM110,000.

The incremental cash flow from operation is calculated as RM200,000.

Approach A- Traditional payback period tool

$$IO = \text{RM}400,000$$

$$\text{ACF, annual cash flow} = \text{RM}200,000$$

$$\text{Payback period} = 400,000 / 200,000 = 2 \text{ years}$$

Approach B- Incorporating interest cost in initial outlay

$$IO = \text{down payment} + \text{total instalment}$$

$$= \text{RM}80,000 + \text{RM}440,000$$

$$= \text{RM}520,000$$

$$\text{ACF} = \text{RM}200,000$$

$$\text{Payback period} = 520,000 / 200,000 = 2.6 \text{ years}$$

Approach C- Using the 'actual' cash flows

$$IO = \text{down payment} = \text{RM}80,000$$

$$\text{ACF} = \text{incremental cash flow} - \text{annual instalment}$$

$$= \text{RM}200,000 - \text{RM}110,000$$

$$= \text{RM}90,000$$

$$\text{payback period} = 80,000 / 90,000 = 0.99 \text{ years}$$

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## 2. *Cash flow calculation based on cash flow per unit concept*

This approach has an advantage of being a relatively easy way of calculating cash flow since it uses the readily available information on costing and pricing. But there is some tendency for making mistakes in the calculation of cash flow in circumstances where the undertaking of the action or investment evaluated either increases or decreases any of the firm's cash overhead (fixed) cost.

In this circumstance, there may be a tendency to use the fixed cost per unit available from product costing information that is normally based on the absorption costing approach (see chapter 5, section 5.7.3 (b)). The amount of these cash overhead costs apportioned per unit is based on a certain assumed production level or turnover level and thus it is an error to use the same cost per unit on different levels of production to calculate the unit cash flow. The resulting figure either understates or overstates the true value of the profit margin.

There is also a tendency to use 'marginal costing' and disregard the incremental cash overhead cost altogether. As an example, in this decision-making analysis, the potential reason for the non-inclusion of incremental fixed cost, such as the cost of aggressively selling the new product, in the cash flow calculation probably is that it has been simply disregarded or overlooked. Other reasons however could be because it was very minimal or it is a sunk cost.

## 3. *The use of payback period for target setting and the 'what if' approach*

The use of payback period to determine the firm's sales target is very similar to the accounting 'breakeven analysis' which is prescribed for operational financial decision-making as opposed to strategic decision-making such as this.

However, in the context where the environment is changing and cash flows are inherently difficult to predict, Scott (in Romano et al., 1988) suggests a somewhat similar capital budgeting technique whereby it is suggested the discounted cash flow techniques be used on a '*what if*' basis which involves asking '*how much of the product I have to sell in order to make this investment decision profitable on a discounted cash flow basis?*'. The technique suggested by Scott is actually similar to the 'discounted breakeven analysis' discussed by Freeman and Freeman (1993).

In comparison to these approaches, even though the technique used by the firm is similar in terms of the intention to find a target sales, it is different not only because the discounted cash flows were not utilised, but also because a shorter time dimension than the asset life is imposed on reaching this target. Thus, it still shares the advantages of the traditional payback discussed earlier in this thesis in addition to several other advantages.

The advantage of this technique is that it reduces the need to predict the sales when the firm is exposed to open-ended change situations. Yet, the firm still has to make a judgement on whether the target can be achieved which requires the firm to refer back to the environment. Thus, there is still some need to deal with the open-ended change.

Another advantage of the technique is that it provides the firm with a target and a controlling device. But being production-oriented exposes the firm to more risk. However, given the context of the decision-making whereby some attempt to reduce risk has been undertaken through various means (the conservative payback period calculation, the ready market, limiting the amount of investment and targeting for a small market share) the technique would probably work. In addition to these actions, according to the owner-manager, risk is also kept at a minimum by diversifying the firm's customer base and production base. In fact, the firm is producing a wider range of products and serving a bigger number of customer types relative to other comparable plastics manufacturers.

Other factors that are conducive to the approach taken are the fast growing nature of the Malaysian economy, the high demand for plastic products, the nature of the sub-contract market that allow orders to be placed in advance and also the owner-manager's personal inputs in terms of having good marketing and business networks.

Notwithstanding the above advantages, this approach bares all the theoretical weaknesses of the traditional payback period. The approach discussed by Scott and Freeman and Freeman which is based on the discounted approach would be a better approach in this respect.

### III. Factors Impacting on the Financial Management Approach

Several factors, internal and external to APLAS can be said to have some influence over its financial management approach described in the previous section:

- ***The internal contextual factors***

It can be argued that the application of some forms of financial criterion in this decision-making incident resulted from a set of explicit and implicit *financial-related motives* pursued by the owner-manager. Although the actual nature of the implicit motive is not clear, it can be synthesised as to achieve a satisfactory level of 'net cash flow' from certain limited exposure to risk, with the 'net cash flow' being defined by the author as the difference between cash inflows and cash outflows. This motive is justified by its consistency with the payback criterion and the 'net cash flow' criterion.

Apart from this, the high *significance of financial motives* to the owner-manager relative to any potential non-financial motive, implicit or explicit, can be argued to result in the financial management approach being utilised as the main source of guidance in making the selection. It can also be concluded that the owner-manager's personal desire for independence does not impose great influent on the decision-making approach.

The argument that the decision-making is driven by some motives coupled with the obvious limited capacity of the owner-manager to search and process information, particularly those related to the implication of each alternative actions on the firm, suggest that the nature of the financial management approach and its importance in guiding the decision-making selection is influenced by the adoption of the Simon's *bounded rationality*\_(Stacey 1992).

Arguably, the nature of the financial management approach is also influenced by Hargreave Heap's (1989) *expressive rationality*. It is clear from the interview with the owner-manager that none of the above techniques and concepts used to guide the investment decision-making incidents derived from any formal knowledge about them. Instead, they represent the owner-manager's own conceptualisation of what is considered important to him. With this, it is not surprising that typical confusion and pitfalls that are normally addressed in financial management literature and texts associated with the application of 'somewhat' similar traditional tools and concepts arise. In the calculation of the 'return from investment' using a somewhat similar tool to the AROR, total investment cost was used instead of average annual investment. This tendency for such mistake making is addressed in the majority of the related literature (see Lumby, 1994). Next, the conceptualisation of 'cost of capital' omits the implicit cost born by the equity holder and the tax implication. These are also potential pitfalls which are easily fallen into if theoretical knowledge in them is not present. This expressive rationality thus partly explains the gap between the traditional financial management approach and the adopted approach.

The lack of traditional financial management application, that is the non-utilisation of discounted cash flow tools and techniques, in this decision-making can be related to the *lack of knowledge* on traditional financial management, specifically in the area of capital budgeting. Without theoretical knowledge base on financial management, the firm is unable to grasp the traditional financial management concepts of wealth and time value of money.

The owner-managers low *risk-taking propensity* may explain the utilisation of payback period criteria and the special treatment of risk in the decision-making which includes the use of a conservative estimate of turnover and the inclusion of interest cost in the IO.

In addition to the above explanation, the way monthly cash flow was calculated can be associated with the owner-manager's *functional background* in both marketing and engineering. Both of these functional areas result in the owner-manager being involved with costing activities, and this explains the tendency to use unit costing information to calculate the investment's monthly cash flow.

Specific discussion on the need for this expertise and knowledge reveals that there is no feeling of such need. The owner-manager feels safe using the payback period and accounting profit tools. This in a way infers that the use of short payback period provides the 'safety' feeling over the inability to analyse the actual profitability of the investment.

Albeit the lack of expertise and *formal knowledge* of traditional capital budgeting inhibits superior financial management techniques, they did not constrain the application of payback period and the appreciation of the 'cash flow' and 'risk' concepts in the decision-making. The 'cash flow' estimate can be argued to derive from his own conceptualisation of what profit should be while the utilisation of the payback period tool and the 'time' concept, according to the owner-manager, is based on 'common sense'. With regard to this argument, it should be noted that the owner-manager did not make use of the 'cash-flows' and 'payback period' terms despite having used the measurement and tool.

In contrast to what is expected, the owner-manager's *appreciation* of the importance of financial management as discussed in the previous section does not lead to the application of complex investment decision-making analysis. This is probably the consequence of other factors being more dominant than this issue in influencing the financial management approach. However, this characteristic can be argued to have led

to the financial-oriented motive being the dominant motive and thus led to the adoption of the financial management approach as the main decision-making tool.

The *pioneer status* enjoyed by the firm is probably the main factor explaining the exclusion of tax implications in this decision-making analysis. In addition, the owner-manager's lack of *formal financial management knowledge* and lack of *awareness and appreciation* of the importance of accounting for tax in the investment decision-making are other contributory factors.

Finally, the dependency between the firm's investment and financing decision leads to the inclusion of interest cost in the cash flow calculation with the *expressive rationality* taking a part in shaping how the financing implication should be incorporated into the decision-making analysis.

- ***The external contextual factors***

- . The Malaysian *fast growth economy*, the *high demand* for plastic products and the aim for small market share can be argued as together influencing the use of payback period for target setting since they together reduced the risk exposed by this production oriented approach and resulted in a high level of confidence that the target could be achieved.

(C) **Analysis and Findings: The Financial Management Approach in Financing Decision-Making**

I. **The Nature of the Financial Management Approach**

a) **Incident 1: Financing the Start-up**

In the first decision-making incident, the firm decided to finance its start-up using RM100,000 shareholders equity. The decision-making involved the alternatives of waiting for government funding, using borrowed funds or using the shareholders'

equity. According to the owner-manager the reason for choosing the latter over the other two alternatives is:

*“Actually I prefer to use the government schemes for bumiputra SME because the rate is much lower but it takes four to six months before it can be granted. .. I don’t mind the paperwork because I already had the forms ready. I just cannot wait that long because we had customers ready to offer us contracts. If I wait, they would give the business to other firms and we might miss the opportunity forever. I don’t like borrowing from the banks, except to finance purchase of assets, because if you borrow you are just working for the bank; but a government loan is alright because the interest rate is low. Since we have some savings, it is better to start by using our own money.” (APLAS, 1996: Response 9)*

In response to the probe on why a government soft loan was preferred to owners’ equity, the answer given is:

*“We would rather pay 5 percent interest rate and save some cash for future uses because bank borrowing is very expensive.” (APLAS, 1996: Response 10)*

The above two responses give an indication of the use of judgemental cost and benefit analysis in the decision-making. Response 9 indicates that the benefits from using shareholders’ funding over government soft loans were considered in terms of the *speed* of action which enables the firm to take the current business opportunity which had some immediate guaranteed profit and potential future profit rather than having to wait for three to four months before the soft loan can be approved. Another benefit from the speed of action that perhaps has been considered is the fulfilment of the *owner-manager’s desire* for getting into the business immediately. The second benefit was not mentioned by the owner-manager but, considering the context within which the decision was made, that is, the lapse of six months of ‘preparation period’ and the owner-manager’s unemployed status, the author concludes that this is one benefit that has been considered in the decision-making.

The cost or disadvantage of using the owners' equity instead of a soft loan is the additional *interest* that the firm has to bear since, as inferred by response 10, the owner-manager has assigned an *implicit cost* equal to the normal bank interest rate to equity financing.

Bank borrowing is clearly unfavourable compared to the soft loan because of the *interest rate*. However between normal bank borrowing and equity financing, the interest rate did not stand out as the main factor because of the implicit cost assigned to the latter. The main factors that contribute to favouring the equity financing to normal bank borrowing is the *negative feeling* about financing the firm's operation using bank borrowing, which is the feeling that he is working for the bank, not for himself.

The above analysis indicates that the following factors were relevant in the financing decision-making:

- The relatively low interest rate of a government loan;
- The potential loss of current opportunity resulting from waiting for a government soft loan;
- The relatively high interest rate of bank borrowing;
- The assumption that the opportunity cost of owners' equity/ shareholders' funds is equal to the normal bank borrowing rate;
- The owner-manager's negative feeling about financing the operation using bank borrowing, that is the feeling that he is working for the bank, not for himself.

### ***Summary of the financial management approach***

With the influence of some forms of financial related factors on the decision to use HP, it is concluded that some form of financial management approach has been utilised. The financial management approach takes the following form:

1. Utilises the 'financing cost' as the main decision-making criterion;



2. Utilises the interest rates of the alternative debt-financing instrument as the tool to measure the 'debt financing cost';
3. Utilises the interest rate of normal bank borrowing as the tool to measure the 'equity financing cost';

However, with the influence of other non-financial factors (the owner-manager's negative feeling towards financing the firm's operation using bank borrowing and his desire to commence the business) on the decision to finance the start-up using shareholders' capital, arguably, the financial management approach only provides partial guidance to the decision-making.

## **ii) Incident 2: Financing the expansion**

The expansion programme was financed by 20 percent equity and 80 percent hire purchase financing with a commercial bank. The owner-manager admitted that this was the only alternative that he had considered.

The reason for using this form of financing was given as follows:

*"It is normal to finance fixed assets using hire purchase, it is easy and fast."*  
(APLAS, 1996: Response 11)

*"Using the bank to finance fixed assets is okay to us because the asset can be used to generate profit more than the interest cost."* (APLAS, 1996: Response 12)

In response to the question on why the 20:80 ratio of equity to debt is used, the following answer was given by the owner-manager:

*“The bank usually prefers us to finance 20 percent of the asset cost, we think this is fine with us because we have the amount of money.”* (APLAS, 1996: Response 13)

Response 8 drawn earlier can be utilised to infer that bank borrowing was chosen due also to the fact that direct financial benefit can be derived from the investment to be financed. This infers that the ‘risk’ element was taken into consideration in the decision-making.

In summary, the decision-making is influenced by the following factors:

- the *norm* in the industry;
- the bank’s *suggestion*;
- HP is an *easy and fast* way of financing;
- The fact that the investment gives *direct financial benefit* to the firm.

### ***Summary of the financial management approach***

The decision-making involving the choice of the type of financing did not make use of any form of financial management approach. This is justified by the non-utilisation of financial criterion in the decision-making. It should be noted that the decision to raise additional financing was influenced by the acceptance of the investment project.

The decision-making on the other hand is influenced by the several non-financial factors namely, the norm practice, the bank’s suggestion, the non-financial benefits of HP and the nature of the financial benefits from the investment to be financed.

## **(II) The Extent of Traditional Financial Management Application**

### **(i) Incident 1: Financing the Start-up**

As indicated in the conceptual framework of this study, there is not a single financial management tool that specifically interfaces with the choice between waiting for

cheaper financing and immediate use of a more expensive financing. This is the consequences of the 'separation theory' underpinning the development of traditional financial management tools and techniques. Hence, there is no specific tool with which the financial management approach utilised in this incident can be compared.

However, comparison can be made between the concepts relevant in the decision-making and those of traditional financial management. It is clear that the traditional financial management concept of 'cost of debt' was emphasised in this decision-making by comparing the interest rates between a government backed loan and normal bank borrowing. The 'cost of equity' and 'opportunity cost' concepts can be said to be addressed by associating the cost of using shareholders' equity with the possibility of having to use high interest borrowing to finance any financial deficiency. The comparison of the cost associated with each type of financing alternative and the preference for the one with the lowest cost infers the relevancy of the traditional financial management 'return' concept.

In contrast to the traditional financial management approach, the practised financial management approach did not consider the trade-off between risk and return but instead emphasised the trade-off between the *speed* of getting access to the fund and the *cost* of the fund. The trade-off analysis however is undertaken in a crude manner since no quantification was made and some of the benefits and costs are not addressed in the decision-making. Non-financial benefits not considered include those such as self-satisfaction and financial costs and benefits such as return from the capital investment during the waiting time, the reduction of current risk and *probably* future risk because of the guaranteed contract.

#### **b) Incident 2: Financing the expansion**

The analysis on the financial management approach practised in this decision-making incident indicates no utilisation of traditional financial management tools and techniques in the decision making. The debt-equity ratio adopted by the firm is based on the suggestion by the firm's banker, the ratio normally used by other firms and the

availability of equity instead of being based on the analysis of the financial implications of an alternative ratio.

Finally, in contrast to the decision to finance the start-up, the traditional financial management concept of 'financial risk' is not emphasised in this decision-making.

### III) **Key Factors Impacting on the Financial Management Approach.**

- ***The internal contextual factors***

Though in both of the financing decision-making incidents no explicit objective is documented, implicit financial motives seem to underpin the financial management approaches. In the first incident, the implicit motives guiding the decision-making are the desire to minimise the financing cost (or maximise return) and the desire to speed up the investment action. The trade-off between these motives can be argued to have led to the emphasis on the interest rates and the speed of action, while the incapability of the owner-manager to quantify the benefit of the speed of action led to the utilisation of judgemental cost-benefit analysis.

*Expressive rationality* can be argued to have resulted in the relevancy of the key financial and non-financial motives or factors in this decision-making incident since their relevancy are derived out of the owner-manager's judgement and self-esteem. Arguably, *bounded rationality* also plays a crucial role here, due to the relatively high degree of uncertainty surrounding the information relevant to the owner-manager (the financial consequences of the decision to finance the investment immediately using equity vs the financial consequence of the decision to wait for a cheap loan) in this incident compares with other incidents discussed earlier.

As for the second incident, the desire for convenience mode of financing results in the hire-purchase financing being considered first before any other alternative.

It should be noted that the owner-manager's *low risk taking propensity* does not seem to explain the lack of emphasis on the financial risk concept in both incidents of financing decision-making. This can be explained by the *business risk* related to the financing incidents being perceived by the owner-manager as low. As discussed earlier, this perception resulted from the existence of a guaranteed contract, the confidence in the market for plastic products and the firm's risk reduction activity.

By comparing the two incidents of financing decision-making, it is clear that the decision-making approach utilised in financing decision-making is influenced by the type of activity or investment to be financed because the approach relating to a non-fixed asset financing process is different from that relating to fixed asset financing. In the latter incident, debt financing is considered the major source of financing and a high debt to equity ratio is acceptable. In the former case, equity is considered the main sources of financing, an attempt is made to minimise the use of debt and no comparison of return and cost is made. One factor which probably explains the differences is the amount of *business risk* associated with each of the decisions. The relatively low business risk involved in purchasing a fixed asset, due to it being used as the collateral for the loan, compared to investing in starting up a business allows the use of leverage financing. Another potential factor is the 'difficulty' in getting loans from external sources in the case which involved non-fixed asset financing which leaves the firm without other alternatives other than relying on internal financing. Another factor that seems to influence the financial management approach is whether the *return* from the investment is more directly derived or it is more indirectly derived.

### **6.3     CASE 2 - BPLAS LTD.**

#### **(A)     The Unfolding Operating and Strategic Context**

##### **(I)     Background of the Firm**

BPLAS, a small plastic company involved in the manufacturing and supplying of plastic electronic and automotive components, was established in 1992 by a Malaysian Chinese husband and wife team. Managed by the husband (the owner-manager) with a work force of 35 employees, the firm has recorded sustained growth in its turnover with a sales of RM1,624,000 in 1994, RM1,907,000 in 1995 and RM2,010,000 in 1996. Eighty percent of the turnover in 1996 derives from the electronic sector and the other twenty percent derives from the automotive sector. The firm is serving 4 major customers.

##### **(II)    Overview of The Strategic Development of the Firm**

While working in a plastic injection moulding firm in Australia, the owner-manager was aware of the business opportunity as a plastic component supplier in his home country, Malaysia, due to its fast growing economy especially in the electrical and electronic sub-sector and the move towards the use of local content among MNCs. Teamed with his wife, a practising accountant, BPLAS was incorporated in 1992.

The lack of track record as an injection moulding firm, however, formed a constraint to the firm's involvement in the electronic sub-sector. This forced the firm to commence its operation as a sub-contractor to a local furniture manufacturer, manufacturing plastic furniture components.

With the experience of manufacturing plastic furniture components, by the end of 1992, BPLAS was able to dip into the electronic component sub-sector. The firm began to attract sub-contracting jobs from local suppliers of plastic electronic components and, due to high customers' satisfaction, the firm continued to secure more and more sub-contracting contracts. The firm was then fortunate to build a linkage with a locally

owned electronic product manufacturer, of which the firm was appointed as its direct vendor. In 1996, the firm managed to secure a large project with this corporation in developing and manufacturing its latest computer products.

The stiff competition from other well-established plastic firms, the late entry in the plastic component sector and the firm's 'Non-Bumiputra' status, however, are considered by the owner-manager as the barriers to the firm's involvement as the direct vendor of the electronic MNCs and for the firm's heavy reliance on sub-contracting jobs. According to the owner-manager, 70 percent of 1996 sales was derived from third level sub-contracting jobs, while the other 30 percent was derived from the vendor arrangement.

The low profit margin from the sub-contracting jobs and the stiff competition initiated the search for additional business opportunities within the same manufacturing process. Aware of the availability of the government ITAF scheme for upgrading small business technology (in which up to 50 percent of upgrading cost for eligible projects will be subsidised by the government) and the availability of expertise within the firm, the owner-manager saw an opportunity to invest in Computer Aided Design (CAD) and Computer Aided Engineering (CAE) systems. The investment in the system in September 1996 was expected to help the firm in developing high-value added plastic products and to venture into the technical assistance sector.

### **(III) The Internal Operating Environment**

The firm is owned by a husband and wife team with the husband being the owner-manager and the wife, whilst not involved with the firm's management, having a permanent job as an accountant outside BPLAS.

Being the only owner who is actively managing the firm, the owner-manager's characteristics form a pivotal part of the internal operating variables of BPLAS and to some extent influence the characteristics of the firm itself

a) **The Owner-Manager Characteristics**

The owner-manager has a **background** in engineering and can be regarded as an expert in the injection moulding process. He acquired an engineering degree and had several years of experience overseas as an engineer in a plastic manufacturing company before forming BPLAS.

Leading BPLAS for over 4 years, from the setting up stage to the current growth stage, the owner-manager can also be said to possess some **experience** in business, specifically in the plastic sub-sector.

The **goal** of the owner-manager is to achieve certain satisfactory levels of wealth and to maintain control over his life and his business. This goal is in fact the driving force that led him to partnering with his wife in the setting up their own business.

The owner-manager also reflects a **low risk-taking propensity** characteristic. Actions that are taken by him must be justified with a relatively clear picture of the possible outcomes and he seeks to retain an ability to absorb any potential loss from his action. This is reflected in his statement: *"I am a very conservative person, I will think very hard before going into something. I only go for two years pay-back period, not more except if somebody can provide me with me a 5 years contract, black and white, then I commit myself for five years"* (BPLAS, 1996: Response 1).

Another characteristic of the owner-manager that can be concluded from the field-study is a high level of **strategic alertness**. He demonstrates his awareness of the external environment facing Malaysian small businesses, particularly those in the plastic sub-sector, with regard to change issues such as the current negative growth of the global electrical and electronic industry and its impacts, the high competition in the plastic injection moulding industry, the increase in labour costs that is chasing the MNCs away from Malaysia, the existence of new technology, the export potential for plastics products and the government incentives and schemes for SMI. Current insight into the external environment of his business is obtained through update from the business news and interaction with his suppliers and customers.



With regard to **financial management skills**, the owner-manager possesses no formal training and no expertise. He nonetheless demonstrates a certain level of knowledge of financial management or perhaps accounting as indicated by his use of some terms such as profit margin, the ROA, cash flows and the NPV, and by his expertise in the area of pricing and costing.

The following assertion reflects the owner-manager's **appreciation** of the cash flows concepts.

*“Business is about two things, the profit and cash. At the end of the year, you must show some profit and you must have some cash. Some project with no cash flow after 3 years, may be viable to some firms but it will kill us before the cash comes rolling in” (BPLAS, 1996: Response 2).*

#### **b) The Firm's Characteristics**

The firm has a formal but simple three layered **management structure** with four personnel in the top management, who are close family relatives, and two clerks. The owner-manager holds the CEO and the marketing manager posts while the other three top managers are the production manager, the administrative/account manager and the purchasing manager. The accounting tasks of updating accounts and product costing are the main tasks of the administrative/account manager.

**Strategic decisions** in BPLAS are decided based on the collective opinion of the senior managers. The owner-manager also consults the other shareholder, his wife, and the administrative manager on a personal basis. The final say, however, is the owner-manager's.

The firm's **long term goal** is to grow in terms of turnover and profit. The firm however places more emphasis on **short-term objectives**; that is, to achieve certain levels of profit growth and striving for quality customer service. The owner-manager believes that with good customer service levels, the customer will have faith in the firm and thus

would have no second thoughts of nominating it for a bigger contract. This ultimately would lead the firm into achieving its long-term aim of growth.

The presence of the administrative manager with an educational background in the accounting discipline furnishes the firm with **accounting knowledge** and perhaps expertise. This indicates that some level of knowledge of traditional financial management is also present.

In addition to placing importance on profitable growth, the firm is placing equal importance on **cash flow**. The owner-manager's appreciation of the cash flow concept highlighted earlier is one indication of this. Another indication lies in the administrative/account manager's assertion: "*cash is the essence of the company . . . we (he and the owner-manager) share the same opinion that in order for the company to survive we should watch our cash flow very tightly*" (BPLAS, 1996: Response 3)

The awareness of the **importance of timing and opportunity cost** concepts is then reflected in the administrative/account manager's assertion: "*if we can receive our money earlier, we have the option for short-term investment, and also cutting down on overdraft usage*" (BPLAS, 1996: Response 4).

The firm holds a **limited customer base**, serving only 4 main customers, all from the consumer electronics sub-sector.

(B) **Analysis and Findings: Financial Management Approaches adopted in Capital Expenditure Decision-Making**

Three incidents of capital investment in 1996 will be the focus of analysis in this section. Discussion of the nature of the financial management approach and the extent of traditional financial management application will be undertaken separately for each decision-making incident, while the discussion on factors impacting on the financial management approaches will be undertaken in a single discussion for all the three

incidents. This enables the author to derive a more solid theoretical explanation of the firm's financial management approaches rather than by analysing them individually.

## **I. The Nature of the Financial Management Approach**

The three incidents of investment decision-making undertaken in 1996 which will be discussed here involve investment in a dehumidified dryer, an ultrasonic welding machine and a CAD/CAE system.

### **i) Incident 1: Investment in the dehumidified dryer**

The 'dehumidified dryer' is equipment that dries materials to a certain required point in terms of moisture content in the resin. It is particularly important for manufacturing engineering plastics, which usually needs very dry material so as not to interfere with the materials' characteristics.

A decision was made to purchase the equipment which cost the firm RM69,000 of which 80 percent was financed using hire-purchase financing. The decision-making was carried out in an informal manner with no stated objective or written proposal.

The decision to acquire the dehumidified dryer was initiated by the awareness that the firm requires this equipment to enable it to produce the increasing number of high quality engineering plastics currently demanded. This is reflected in the following statement:

*"With the increase in current demand for the product, we start to produce more engineering plastics. The existing small unit cannot cope with the demand, so there is a need for this additional equipment. It is a requirement that if you want to produce quality engineering plastics, you have to buy this equipment, if you don't use it there will be a lot of defects, furthermore with the better quality you can charge a little bit higher margin." (BPLAS, 1996: Response 5)*

Given the specific purpose of acquiring the equipment, there is no alternative action other than not taking the action.

The owner-manager claims that no calculation or analysis preceded the undertaking of this capital expenditure but remarks that the following rationale has been considered and underpins the owner-manager's thinking:

*"How can we analyse such a decision, the equipment is just an additional accessory that does not have any direct benefit on the sales and profit . . . it builds flexibility into the process in terms of the ability to manufacture products of different levels of moisture content . . . so it opens our door to bigger markets and we can serve our customers better, whatever product they want we can manufacture for them, we can give a quality service for them, so the customer won't think twice about granting future contracts to us. Furthermore, if we don't buy the equipment, we might lose some of our sales to competitors. As you know, our market is very competitive."* (BPLAS, 1996: Response 6)

It can be argued from the above assertion that even though financial analysis was not carried out, not even in the form of a 'crude mental estimate', the decision was based on *significant thought* in that there existed some *underpinning justification* on the desirability of the decision. The owner-manager visualised the benefit of the capital expenditure beyond the mere ability to satisfy current need of a particular customer but to encompass various direct and indirect benefits that can be summarised as follows:

- ⇒ the ability to generate more sales utilising the firm's present excess production capacity position with a *high degree of certainty* by taking the contract offered by the customer rather than hoping for some uncertain sales contract,
- ⇒ the potential for getting more *sales* in the future due to satisfying the customer's current needs

- ⇒ the ability to diversify its product-base to include engineering plastic products which means opening the door to a *bigger market*,
- ⇒ overcoming the potential of *losing existing sales* to competitors,
- ⇒ the potential for *profit enhancement* due to the attractiveness of engineering plastic products in terms of higher profit margin and higher current and future demand compared to existing products.

Indeed, the ‘significant thought’ can be said to reflect the owner-manager’s implicit *strategic analysis* of the investment. The decision to undertake the capital expenditure was perceived as leading to a more *sustainable competitive advantage* position by widening its market-base, building an efficient flexible production base, improving product quality and satisfying customer needs. Due to these considerations, the capital acquisition was perceived as ‘necessary’.

Since the benefits were considered in terms of their implication on *sales, profit* and *risk*, it can be said that the owner-manager had tried to visualise the benefit of adopting the equipment (i.e. the customers’ satisfaction, the quality improvement and the market attractiveness) using a financial lens. However, no quantification was conducted, instead it can be said that a judgemental ‘cost-benefit analysis’ was made based on the owner-manager’s *strategic analysis* and *gut-feel* which led to the decision to purchase the equipment. The application of the ‘cost-benefit analysis’ infers the utilisation of, ‘net cash flows’ criterion, defined as the excess of cash inflow over cash outflow, similar to the one identified earlier in the APLAS case study.

### ***Summary of the financial management approach***

The above analysis indicates that the dehumidified dryer decision-making is underpinned by a financial management approach that possesses the following characteristics:

- a) Utilises the ‘net cash flow’ criterion to judge the desirability of the investment;

- b) Utilises a judgemental/subjective cost-benefit analysis that is based on the owner-manager's implicit strategic analysis and subjective judgement of the indirect financial benefit of the non-financial benefits of the investment to infer the 'net cash flow' criterion.

The lack of influence from qualitative factors other than those which input into the cost-benefit analysis indicates that the decision-making is fully guided by the financial management approach adopted. However, the financial management approach is very much dependent on the subjective judgement and strategic analysis more than on financial tools to inform the 'net cash flows' criterion. Financial tools can be said to provide no contribution to this incident of decision-making.

## ii) Incident 2: The investment in the 'ultrasonic welding machine'

A decision was made to purchase an 'ultrasonic welding machine' which cost the firm RM30,000 of which 80 percent was financed using hire-purchase financing. This machine is an item of equipment used to join two plastic parts together. It enables the firm to carry out 'assembly processes' to weld plastic parts and components as an additional secondary operation.

Similar to the earlier decision-making incident, this decision-making process was also carried out in an informal manner with no stated objective or written proposal.

According to the owner-manager the decision-making was initiated by a *customer's request* for the firm to supply plastic parts that need some welding or assembly operation. The main reason for undertaking the investment is stated by the owner-manager as follows:

*"We buy the machine because there is sure demand for it. We had talks with our customer to determine that there is a projected need for the capacity then we bought it."* (BPLAS, 1996: Response 7)

The secured contract not only involves the assembly operation but also the supply of the assembled plastic components to the customer. According to the owner-manager, they may lose the purchasing contract for the component if the assembly activity cannot be carried out.

Response 7 indicates that meeting *customer's demand* and the 'certainty' of the sales are two important factors that contribute to the undertaking of the investment. However, the owner-manager also claimed that some calculation was made prior to the investment:

*"We did a little more calculation with this. We say the order is about 100,000 a month, probably 1 million a year; we calculated that we need to sell 1.5 million pieces to pay off the cost. So, we decide that if we have this job for the next two years, it will pay for its cost and we can make profit after that."* (BPLAS, 1996: Response 8)

The description above indicates that the assets *ability to payoff* its cost in less than two years is an important criterion influencing the decision to undertake the investment. This is further emphasised in the following assertion:

*"If you cannot break-even by two years, you are in trouble, we always make sure we can break-even by two years.. you can have a project that gives a high return but if it doesn't pay you fast, you will be killed before you actually get there."* (BPLAS, 1996: Response 9).

Response 9 also indicates that the utilisation of payback criterion is closely linked to the desire for *liquidity*. Apart from this, the statement, "*we can make profit after that*" in Response 8 provides evidence of the implicit utilisation of the 'net cash flow' criterion. No specific tool or calculation was utilised to measure it because the ability to payback automatically reflects a positive net cash flow value.

Considering the possible gap between the way cash flow is determined in small business and the way it is prescribed by the financial management literature, the owner-manager was asked to elaborate the detail of the calculation. The elaboration shows that the difference between the price paid for the assembled product and the cost of manufacturing the product was used as the price per piece assembled. Production cost, which includes a certain portion of depreciation, was deducted from the price per piece to derive the 'cash flow' per piece. The payback quantity was derived by dividing the investment cost with the cash flow per piece. The payback quantity of 1.5 million units indicates that the investment can be paid off in less than two years.

The account manager has reasoned out the inclusion of the depreciation cost in the above calculation as follows:

*"Some organisations do not take into account the depreciation as part of the production cost but we do. This is to ensure that we are getting clear profit and not merely breaking even over the investment. I suppose you cannot hope to just get the investment cost back. You must make some money to compensate for the risk." (BPLAS, 1997: Response 10)*

Further insight is gained on how the portion of depreciation allocated to each piece is determined. The account manager clarifies that the percentage of depreciation to be charged on the annual sales is set based on the owner-manager's 'judgement', which takes into consideration the *level of certainty* of the sales and the *complexity* of the product. This percentage is divided by the annual sales quantity to get the depreciation charged per piece.

### ***Summary of the Financial Management Approach***

In short, the presence of financial criterion infers that some form of financial management approach has been utilised in the investment decision-making. The financial management approach appears to possess the following characteristics:



- a) Utilises payback and 'net cash flow' criteria to judge the desirability of the investment
- b) Utilises the following form of payback tool and technique:
  1. 'Cash flow' per piece = revenue per piece – variable cost per piece – a certain portion of depreciation, D,  
whereby D represents the amount of 'profit' per piece required to compensate for taking the risk and is set based on the top management's judgement of the level of certainty of the sales and complexity of the product;
  2. Payback quantity = (IO + total interest) / cash flow per piece
  3. Accept the investment if the payback quantity is less than the expected demand quantity

The above financial management approach can be argued as providing a full guidance to the decision-making analysis since there is no other influential factor that contributes to the undertaking of the investment, other than the above-mentioned financial criteria.

### iii) Incident 3 - The Investment in CAD/CAE System

A decision to allocate RM100,000 for the investment in Computer Aided Design (CAD) and Computer Aided Engineering (CAE) systems was also made by BPLAS in 1996. Fifty percent of the cost has been subsidised by a government grant under the ITAF scheme. The remaining RM50,000 is self-financed by the shareholders on a phase to phase basis.

A 'paper work' summary which includes the background of the firm, past financial statements and the background of the management team was prepared to mainly satisfy MITI requirement for the application of ITAF. There is no requirement from MITI for any kind of capital budgeting analysis regarding the capital expenditure. According to the firm's administrative/account manager, MITI did not show any concern for the potential revenue from the investment and was only concerned with upgrading the small business technology.

The idea for the investment was floated by the owner-manager himself who had been involved with this system during his working experience in Australia. The idea has developed in the owner-manager's mind ever since he started his business but the implementation was constrained by insufficient capital resource and lack of expertise to fully utilise the system.

It can be said from the following assertion that the investment is driven by the owner-manager's inspiration for profit growth through *product diversification* and *service upgrading*.

*"I have seen how CAD/CAE design can help a firm develop its products. I strongly believe that there is potential in this. The systems can help the firm to develop a new product, our own product that can give us a higher profit margin. We can also provide our customer with technical assistance such as what material to use and what designs to mould. We can then incorporate a higher charge for moulding the part."* (BPLAS, 1996: Response 11)

Other factors that have some influence over the investment decision that can be inferred from Response 11 are:

- ⇒ the owner-manager's *positive experience* with the system;
- ⇒ the owner-manager's *confidence / belief* in the ability of the system to *generate profit* to the firm;
- ⇒ the *higher profit margin* of own product compared to products sub-contracted from another company.

A 'crude mental and written analysis' was carried out which takes the following form:

*"We felt that we can produce two products that can give us an extra profit of RM100,000 in two years time, but lets say we can instead make only RM50,000, and bear some of the cost; there is a possibility that ITAF will subsidise 50 percent which is RM50,000 and so we won't have to bear the*

*loss. The economic situation also has a bearing on whether our product can be sold or not. We don't really know exactly the outcome of this.*" (BPLAS, 1996: Response 12)

The response implies the utilisation of some kind of *payback criterion*, tool and technique, but the utilisation of the term 'extra profit' (instead of cash flow) raises the possibility of the payback technique being different from the traditional financial management payback technique. To clarify this, the owner-manager was asked to elaborate the calculation further.

The owner-manager clarified that the 'extra profit' is a rough estimated figure. With some idea of two items of own products to be manufactured, the owner-manager with the help of his managers calculated the production cost per piece which included material, utility, labour and depreciation costs and, based on the owner-manager's *gut-feel* on the price, profit per piece was calculated. The sum of the investment cost and total interest was divided by the profit per piece to derive the payback quantity. The owner-manager together with his managers then made a *judgement* on whether the firm could sell this quantity in two years time, in order to raise the 'extra profit' equivalent to the investment cost in the desired payback period.

The above explanation demonstrates that the 'payback technique' utilised in this decision-making is similar to that utilised in the ultrasonic welding machine case in which some portion of *depreciation* and the *total interest* incurred were incorporated into the analysis, to derive the payback quantity instead of the payback period. It also indicates that the input for the whole analysis derived from a combination of collective opinion of the top management, the owner-manager's gut feel and some costing calculation.

Further comment from the owner-manager on the importance of the calculation in the decision-making, shows that the payback period is less influential than the owner-manager's gut feel related to the potential 'long term benefit' to be derived from the investment:

*“Actually we don’t really make the decision on the payback period, we decided to take it because our gut feel tells us that there is a high potential of profit to be derived from the investment. We are talking about long-term and indirect benefits. Since we can afford it now and we have the expertise, I said why not go ahead with it.” (BPLAS, 1996: Response 13)*

The ‘profit’ was further clarified by the owner-manager as *‘what we get is more than what we spent on the long term’* (BPLAS, 1996: Response 14), which match what the author refers as the ‘net cash flow’. This criterion, however, is justified using the management experience and understanding of the industry sub-sector and gut feel which is drawn together into a collective understanding as a basis for making the final decision.

Other factors that influenced the decision to undertake the investment highlighted in Response 13 is the availability of *in house expertise* (with the appointment of the new administrative manager who also has some background of the system) and shareholders’ capital. The emphasis on the availability of expertise can be considered as a financial management action because the owner-manager has considered its importance in terms of enabling the project to succeed financially (both in terms of payback and marginal benefit). Similarly, the emphasis placed on the availability of financial capital can be taken as a financial management action because its benefit was looked at in terms of the high possibility of getting a government ITAF grant (according to the firm’s account manager, borrowing might complicate the grant application process). It therefore can be said that an *implicit strategic perspective* was utilised, in which these two strengths of the firm were seen as the enabling factors, to inform the investment ‘s ‘net marginal benefit’.

### ***Summary of the financial management approach***

The financial management approach can be summarised as follows:

- a) Utilises the payback criterion and ‘net cash flow’ criterion;

- b) Utilises the payback tool and technique that follow the following procedures
1. Cash flow per unit = price per unit – variable cost per unit - certain portion of depreciation
  2. Payback quantity = (Investment cost + Interest) / cash flow per unit
  3. Can the firm achieve quantity of sales equivalent to the payback quantity in the required payback period (two years)?
- d) Justifies the 'net cash flow' criterion using the combination of the top management's strategic analysis, gut feel, experience and belief.

The above financial management approach can be said to fully guide the decision-making selection because no other factor or analysis beyond the scope of this financial management approach has any great influence on the decision to undertake the investment. However, it can be argued that the decision-making choice was only to a small extent guided by financial tools because the payback criterion is considered by the owner-manager as less significant than the 'profit' criterion which means the payback tool is less crucial than the top management's subjective judgement, gut feel, preconception and strategic analysis, in terms of influencing the decision to undertake the investment. In other words, the action is more influenced by the investment's overall 'net cash flow', which the firm is unable to forecast but has been strategically justified in the sense that the investment would lead to product and market development and enhance the firm's long-term competitiveness, than it is by the payback tool.

## **II) The Extent of Traditional Financial Management Application**

### **i) Incident 1- Investment in the dehumidified dryer**

There is no indication of any utilisation of traditional financial management concepts, tools and techniques in this decision-making incident, except for some appreciation of

the risk concepts. Some appreciation of the *risk* concept is said to exist in the decision-making incident because the readily available contract and the bigger market had served as one of the influential factors in the decision-making.

Apart from that, the 'net cash flow' criterion shares some resemblance with the NPV criterion from the aspect that both are based on the *amount of cash flows* of the investment over the life-time of the investment. There is, however, a high tendency that a major difference between them is due to the *time value of money* being ignored in the adopted 'net cash flow' criterion.

Since the 'net cash flow' criterion was inferred from a judgemental cost and benefit analysis, the exact nature of the difference is not known for there is a possibility that the time value of money was incorporated judgementally and subjectively.

### ***The Strength and Weaknesses of The Financial Management Approach***

As the traditional financial management itself has no straight forward solution to accommodate 'non-financial benefits' in the capital budgeting analysis, the approach adopted by the firm can be given credit for utilising the strategic analysis and reasoning to derive the cost and benefit of the investment, which are mostly in the non-financial form and for visualising the non-financial benefits from the financial perspective, in line with their profit motive.

#### **ii) Incident 2 – Investment in the ultrasonic welding machine**

Response 8 infers the utilisation of criterion somewhat resembling *the traditional payback period criterion* to evaluate the desirability of the investment.

However, there are some differences between the adopted payback tool and technique compared to the payback tool and technique prescribed in the financial management literature.

1. Instead of estimating the periodic turnover to derive the periodic cash flow followed by the calculation of the project payback period and the comparison of the project payback period with the required payback period, the payback technique calculates the 'payback quantity', the quantity required to pay off the investment, based on the *cash flow per unit* followed by justifying whether the payback quantity can be achieved within the required payback period. This payback technique is somewhat similar to the accounting break-even technique except that its planning period is equal to the required payback period, not one year as it is for the accounting break-even technique. Moreover cash flow, rather than accounting profit, is the basis of its calculation.
2. The incorporation of a portion of depreciation expense in the cash flow per unit calculation marks a significant difference between the payback period tool utilised in this decision-making incident and the traditional financial management payback tool. The deduction of a depreciation expense did not result from ignorance of the traditional payback period calculations, but was purposely done to ensure that some amount of 'profit' was also gained in the payback period (see Response 10). It can be said to serve the same purpose as the discounted payback period, which is to account for the 'return' or 'opportunity cost' required by the shareholders, but the way it was undertaken is different. At a first glance, it seems that the firm used an arbitrary figure that has no theoretical underpinning since depreciation expense is a non-cash expense, *ipso facto* not relevant to the cash flow calculation except for its tax implication. But real understanding infers that, in the context of this calculation, the portion of depreciation serves as the minimum amount of 'cash return' allocated to the shareholders which is the function of the investment cost. In short, the firm accommodates the shareholders return in the cash flow per unit calculation and thus into the payback analysis. The discounted payback period, on the other hand, accommodates the shareholders required rate of return by discounting the normal cash flows at the required rate of return.
3. The incorporation of interest in the initial outlay calculation is another gap between the payback tool utilised in this decision-making and the traditional financial

management payback period. In this respect, the payback tool is similar to that used by APLAS.

It can be said that instead of the traditional payback technique, the 'modified payback technique' was utilised in this decision-making incident.

Other than the payback technique, no other method was utilised. The use of payback period once again can be linked to the partial appreciation of the cash flows, timing and risk concepts. However, the build-in of 'profit' into the cash flow calculation and the incorporation of interest cost in the initial outlay give an indication that the cash flow concept has been even less appreciated than is expected from the use of payback period because the calculated initial outlay and cash flow are not a reflection of the actual flow of cash that is expected to take place at a particular time.

On the contrary, the incorporation of interest in the initial outlay infers that the firm has placed importance on the 'opportunity cost' concept, while the accommodation of the shareholders' 'profit' in the annual cash flow and the reasoning underpinning the action infer that the firm has placed importance on the 'required rate of return' and 'risk' concepts (Response 9).

As for the technique of incorporating the risk in the decision-making analysis, the financial management approach adopted in this decision-making incident shares some resemblance as well as differences with traditional financial management. First, by varying the 'shareholders required profit' with the level of risk, the approach is somewhat similar to the 'adjusted rate of return' approach of accommodating risk. They are however different in the level of subjectivity involved in the calculation (the approach adopted involved more subjectivity) and in how they are integrated into the payback analysis (the adopted approach incorporates it into the cash flow calculation while the 'adjusted rate of return' approach uses this rate of return as the discount rate).



### ***The strengths and weaknesses of the financial management approach***

1. *Incorporating interest cost and depreciation cost in payback period calculation* – This modified version of the payback period has both a theoretical strength and weakness. Its strength over the traditional payback period is that it acknowledges and takes into account the return required by the shareholders from the investment to compensate for the risk and loss of ‘opportunity cost’ or ‘financing cost’. In this respect, it can be said to serve the same purpose as the discounted payback technique, which is to account for the return required by the shareholders.

It is simpler and more understandable than the NPV and the discounted payback period for it avoids the discounted calculation, but more importantly, it, too, incorporates the cash flow, opportunity cost and risk concepts. Its main theoretical weakness is that the cash flows are not adjusted for the ‘time value of money’ but considering the short payback period requirement, the time effect on cash flows can be disregarded. Another weakness is that it lacks theoretical underpinning because the incorporation of interest cost in the initial outlay and depreciation in the cash flows result in the ‘superficial’ cash flows being utilised; in other words, the analysis is not based on the true amount and timing of cash flows.

But, utilising this approach can be considered much safer than utilising the traditional payback technique because it results in a more conservative estimate of payback period but this is at the expense of high possibility of rejecting a good project.

2. *Calculating the ‘payback quantity’ using ‘cash flow per unit’* - This technique is similar to the approach used by APLAS. The same argument made earlier in the APLAS case, section B (III) (1) and (2) on the strengths and weaknesses of this characteristic of the financial management approach apply here.

#### **iv) Incident 3 – Investment in the CAD/CAE system**

Since this incident utilised a ‘payback period’ criterion and a similar payback tool to that utilised in the ultrasonic welding machine, the argument about the similarities and differences between this tool and the traditional payback tool is similar to that made earlier in the ultrasonic welding machine section.

There is, however, an additional comment on this issue that can be derived from this comparison. The use of a similar ‘required payback period’ to judge the desirability of the alternative actions in both of these decisions at first glance suggests that the firm has not applied the ‘risk-return trade-off’ concept, but insight on how cash flows for the payback analysis was calculated, which shows the use of a different proportion of depreciation expense in the cash flow calculation, suggests otherwise. The application of the risk-return trade-off can also be inferred from the owner-manager’s assertion that high potential ‘return’ is the main motivation for him to undertake the investment.

Apart from the above, the gap between traditional financial management and the financial management approach adopted in this decision-making incident is in the use of the ‘long-term profitability’ criterion, rephrased by the author as the ‘net cash flow’ criterion, a criterion not within the domain of traditional financial management. However it is not clear as to the actual nature of this criterion because no tool was utilised to justify it. The high dependence of this decision on the top management’s ‘gut feel’ and ‘strategic analysis’ represents another gap between the two approaches.

#### ***The strengths and weaknesses of the financial management approach***

All of the points made on the strengths and weaknesses of the financial management approach adopted in the ultrasonic welding machine incident also apply here. An additional point is:

The inability of the payback tool to take account of the long-term financial benefits and indirect financial benefits, namely the increase in the firm’s competitiveness and the

ability to fully utilise the available expertise, represents the main weakness of the financial management approach.

Closely related to the above is the high degree of dependency of the decision-making on the owner-manager's subjective judgement. This represents a weakness from the perspective of financial management theory for it exposes the decision-making to the bias in favour of undertaking the investment, especially when there are numerous non-financial benefits accompanying the investment, such as in this incident.

On the other hand, the financial management approach should be acknowledged for its strength in using long-term perspective together with the payback technique. This is because the use of payback alone would overlook the 'hard to quantify' benefit and the long term potential of the investment while using subjective analysis of long-term perspective alone would expose the decision-making to a much higher level of subjectivity.

### III) Factors Impacting on the Financial Management Approach

The insight into the full context of the uptake of each capital expenditure by BPLAS helps to derive a better understanding of the factors impacting on the financial management approaches and the decision-making processes underlying the capital investment decision-making. Firm-related and size-related factors explain certain similarities of the financial management approach while factors particular to each project explain the differences in the financial management approaches among the three decisions.

- *The internal contextual factors*

The utilisation of financial criterion in all the three decision-making incidents despite the difficulty in quantifying the benefit and cost of the investments can be linked to the importance of *financial-orientated motive* to the owner-manager. A clear indication of this is portrayed in the dehumidified dryer decision-making. Even though no stated

financial motive has been documented while non-financial motives –the desire for customer satisfaction, product quality and flexible operation- were repeatedly mentioned by the owner-manager throughout the interview, in depth questioning reveals that it is the implicit underlying motive of gaining satisfactory level of ‘profit’ (profit being defined as the excess of financial benefit over financial cost) from every action which is guiding the investment decision-making analysis. This underlying financial motive influences at least the utilisation of crude, judgemental ‘cost-benefit’ analysis. It is thus argued that the dominance of the ‘profit’ motive demanded any non-financial benefit being valued for its implication on the firm’s profit, not for its mere existence. This is indicated by the financial implication of non-financial benefits, which is referred to in the conversation as the ‘indirect benefit’, having been repeatedly stressed by the owner-manager.

In all three decision-making incidents, it is clear that the instrumental form of *rationality* was not underpinning the decision-making. The non-existence of a single maximising objective, the lack of consideration for all available alternative actions and the limited information or the inability to capture all relevant information justify this argument.

In all the decision-making incidents, the existence of some underlying financial motives reduces the possibility that the decision-making approach is influenced by ‘procedural rationality’ (Hargreave Heap, 1989). Even though the payback period tool is a tool the owner-manager is accustomed to and which the owner-manager knows has been widely utilised by other businesses, its utilisation is not influenced by this but derived out of the owner-manager’s awareness of its relationship with his motive/motives.

The presence of a ‘profit oriented motive’ suggest that either *bounded rationality* or *expressive rationality*, or both, has taken place. Expressive rationality arguably results in the owner-manager using his own conceptualisation of what are the relevant factors to him and how they can be justified in determining the approach to evaluate the investment with little reference to any external sources for guidance. In the ultrasonic welding machine incident and the CAD/CAE incident, expressive rationality results in

the utilisation of a payback tool that incorporates some portion of depreciation and interest cost, which explains the gap between the traditional financial management and the adopted financial management. The tool can be visualised as the owner-manager's conceptualisation of the tool that captures factors relevant to him. Expressive rationality partly explains the utilisation of strategic analysis as the tool in the CAD/CAE decision-making. The rationality also explains the tendency of 'bias' in the subjective judgement in favour of undertaking the CAD/CAE and dehumidified dryer investment, due to the implicit desire for the accompanied non-financial benefits, which in the dehumidified dryer incident is the customer's satisfaction and in the CAD/CAE incident are the owner-manager's desire for adopting a system familiar to him and the ability to utilise available expertise within the firm and the available government grant. In such cases, some implicit value has been placed on the actions themselves in addition to the achievement of the financial motive. However, the dominance of financial desire relative to non-financial desire results in the bias being minor.

Apart from the above, the limitation of the owner-manager's cognitive capability puts the decision-making in the context of *bounded rationality*. Bounded rationality thus adds to the explanation of the financial management approach adopted and its gap from the traditional financial management approach.

The literature shows that decision-making driven by the inspiration for non-financial benefits makes little use of conventional financial management tools and techniques (refer to section 2.4.3 of this thesis). Having discussed the implications of the motives and the form of rationality involved in the investment decision-makings, a real understanding of the implication of non-financial benefits on the financial management approach can be achieved.

The dominance of the financial motive in all the above decision-makings demands the use of financial perspective in evaluation of the alternative actions. This would include valuing the *non-financial cost and benefit*, if present.

The implication of the non-financial benefits on the financial management approach thus depends on whether the financial-oriented motive dominates the decision-making and the extent to which the non-financial benefit can be quantified and assessed.

In the dehumidified dryer decision-making, even though the non-financial benefits (customer satisfaction, quality improvement, the firm's competitiveness and guaranteed contract) are expected to result in the increase in sales and profit over a long run, the magnitude of the increase resulting from the capital expenditure over several years is difficult to estimate.

The *difficulty* in estimating the incremental financial implication of non-financial benefits, which can be explained by Duncan's (1970 in Stacey, 1996) *complex change* environment with the changes involving many interconnected variables, results in a high level of subjectivity that inhibits any form of capital budgeting analysis being used in the decision-making. A judgemental 'cost-benefit analysis' was thus utilised.

On the other hand, in the ultrasonic welder decision-making, the benefits that were considered take in the form of *financial benefit* (increase in profit) and *non-financial benefits* (customer satisfaction, guaranteed sales contract for both the assembly operation and the component). The direct benefit was first analysed using the payback period and since this benefit by itself was sufficient to justify the cost of the investment, there was no attempt to put some value on the non-financial benefits, and thus the non-financial benefits were totally ignored. This led to the decision-making being based only on the payback period criterion with little influence of owner-manager's judgement.

As for the CAD/CAE investment, notwithstanding that its attractiveness lies in its ability to design and develop moulds and die which can be considered as a *qualitative benefit*, the payback period technique has been applied to aid the decision-making. The payback period calculation is actually incorporating only a portion of the financial implications of the qualitative benefit which the owner-manager and his managers are able to capture. The owner-manager realising that there are other financial implications

of the qualitative benefit, did not base the decision choice solely on the payback period but instead relied heavily on *collective judgement*.

It has already been argued that the owner-manager's financial motives resulted in some form of financial management being utilised in all the decision-making incidents analysed in this study

Apart from that, his low *risk-taking propensity* which is partly influenced by the uncertainty of the business environment results in a conservative financial management which takes the form of the utilisation of payback period criterion whenever possible, that is, whenever the financial implications of a decision can be estimated *and* the inclusion of some portion of depreciation expenses in the cash flow calculation.

The *accounting background* of the administrative/account manager and the *engineering background* of the owner-manager both influence the way cash flow was calculated which seems to be based on the costing and pricing orientation.

The nature of the *sub-contract market* which allows orders to be placed in advance and the potential long-term nature (more than a year) of the contract enable the owner-manager to foresee that the financial cost and benefit accompanies the investment in the dehumidified dryer and the ultrasonic welding machine. This affects the decision making process in several ways. Firstly, it makes the existing or offered contract accompanying the investments much more preferable to the potential benefit from alternative action. This then causes the firm to focus on the existing and offered contracts while overlooking the potential financial benefit of alternative actions. This is reflected in the same 'status quo' position being implicitly assumed in the incremental cash flow calculation. Secondly, the ease of forecasting the potential financial benefit from the sub-contract market results in the owner-manager having much confidence with the adopted financial management approach.

The existence of some level of *awareness* of the importance of timing and opportunity cost concepts as reflected in Response 3 can be argued to have no influence on the utilisation of discounted cash flow tools and techniques.

- ***Investment-related characteristics***

The owner-manager felt that the relatively *small amount of money* involved in the decision-making does not encourage the use of complicated discounted cash flow techniques; “*a few thousand won’t make a difference, but a few million, then it’s a different question*” (BPLAS, 1996: Response 15). This factor provides a good explanation for the non-utilisation of the discounted payback period technique in this firm considering that the awareness of the time value of money and the basic knowledge on this technique exist in this firm. However this factor is very much related to the account manager’s *perception* of what ‘small’ is with regard to the financial implication on the firm.

Another implication of the amount of money involved on the decision-making that can be inferred from this case is in terms of the *magnitude of the loss* that the firm may have to absorb.

The *open-ended changes* specifically facing the acquisition of the CAD/CAE, for it involves manufacturing and marketing a new product in a new market, causes the owner-manager to make a guess as to whether the investment can be paid back in two years period. As the consequence of this, the payback period was not used as the main decision-making criterion. Instead, the owner-manager has to rely on the collective opinion or gut feel about the potential benefit of the investment. The owner-manager’s strategic awareness and experience then played very important roles in influencing the ‘gut feel’.

Given the owner-manager’s low risk-taking propensity as expressed in Response 1, there is another project-related factor that influences the decision-making process. It is the availability of the *government technology subsidisation/support scheme* (ITAF).



With the availability of a government grant, the risk involved in the calculation and gut feel is simply ignored since unforeseen loss can be subsidised by the grant. In other words, the grant offsets the unwillingness and the inability to predict likely revenue from such investment by providing the 'safety net' of subsidy offered by the scheme.

- *The external contextual factor*

The high degree of *uncertainty* in the environment is one of the major factors voiced by the owner-manager as the reason why proper capital budgeting techniques were not conducted, but instead a simple payback technique was utilised. This is reflected in the following remarks:

*"Today the economy changes too fast, you cannot predict three years from now."* (BPLAS, 1996: Response 16)

*"If you have all the information required for a new project, the projection, the investment cost, and you have the expertise to analyse the data, but these are all subjective figures, and can change within a short period, it finally comes down to luck ... I have seen a big company, going through meetings and complicated analysis, but one year later, it lost millions of dollars.. its really boils down to luck"* (BPLAS, 1996: Response 17)

The high degree of uncertainty can be argued to have nurtured the *owner-manager's negative perception* towards the use of financial management in the capital expenditure decision-making.

The high level of uncertainty is also the factor influencing the use of payback period and the payback period criterion of two years. According to the owner-manager, as the result of things change so rapidly, five years is considered very long and thus a two years payback period decision rule is adopted in most of the capital expenditure decision-making.

The government *pre-requisite for granting of support* under the ITAF scheme which required application procedures based essentially on the existing financial position of the firm and not on any integrated investment appraisal can be viewed as a factor that contributes to the non-existence of traditional capital budgeting tools. Nevertheless, the application procedure can be argued to have no influence over the non-utilisation of these tools in the decision-makings considering that the owner-manager perceived the procedure as unrelated to the viability of the project.

- ***The weaknesses of traditional financial management***

The weaknesses of traditional financial management to interface and capture all the financial implications of non-financial benefits were implied by the owner-manager in Response 6 as the reason why it was not utilised in the dehumidified dryer decision-making. This factor hence results in the firm relying heavily on the strategic analysis and judgement in the decision-making incidents involving the dehumidified dryer and the CAD/CAE.

**C) Analysis and Findings: The Financial Management Approaches in Financing Decision-Making**

The decision-making incidents relating to the way the ultrasonic welding machine and the CAD/CAE were financed are analysed to identify the financial management approaches. Decisions were made to finance the former investment using hire purchase financing and the latter investment using internal equity.

**(I) The Nature of the Financial Management Approach**

**i) Incident 1- Financing the ultrasonic welding machine**

The reasons for financing the dehumidified dryer using hire purchase (HP) are given as follows:

*“With HP we know you have to pay the fixed amount every month so you are more committed to work hard.”* (BPLAS, 1996; Response 18);

*“We don’t want to utilise so much cash at that point of time. And besides, the rate of interest was very low then. In the ultrasonic welding machine case, we include the interest portion in our payback calculation and we can still payback in 2 years time.”* (BPLAS, 1996: Response 19);

Considering most of the benefits mentioned above can be gained from the use of leasing, the question of why leasing was not chosen was posed to the owner-manager. The answer is:

*“HP is much easier to handle. With hire purchase, the ownership is ours, we can claim capital allowance but we cannot deduct rent. It depends whether you are working for the medium term or short term. If short term, leasing is o.k, but if you want to build the company over the long term, I would say leasing is not good, at the end of the year you have nothing to show, however I think the main consideration to me is the capital allowance.”* (BPLAS, 1996: Response 20)

The owner-manager claims that no formal analysis was made.

In response to why a particular financial institution was chosen, the account manager gave the following answer:

*“We normally have a few HP companies which we have a good relationship with, this makes processing much easier and faster.. normally, I would inquire and get the rate of interest from these HP companies and then make a comparison and allot the HP to the company whom we find cheaper.”* (BPLAS, 1997: Response 21)

From the above two responses, it can be concluded that the financial management approach adopted in this financing decision-making incident involves the use of the following financial tools to guide the selection of the financing mode:

1. *The interest rate* – The interest rate influences the choice of financing in this incident in two ways. First, a low interest rate encourages the use of borrowing because as later reasoned by the owner-manager, the internal fund could be

saved for future use when the interest rate rises (Response 19). Secondly, the interest rate is one of the main factors considered by the owner-manager in deciding the finance company to use HP (Response 21). Based on this, it can be said that 'financing cost' is a financial criterion utilised in this decision-making incident.

3. *Tax allowance on depreciation* – Response 20 stresses the owner-manager's concern for tax allowance on depreciation and rent payment in deciding on the use of lease financing

The financial management approach, however, does not provide full guidance to the decision-making analysis. This is because, as inferred from the above Responses 20 and 21, some importance has been placed on several subjective, non-financial criteria or factors, which are as follows:

1. The *right of ownership*– This factor resulted in the owner-manager's preference towards a loan compared to leasing (Response 20). However, underpinning the influence of this factor is the long-term goal to build the business.
2. The *psychological factor* – As reflected in Response 18, the owner-manager feels that the fixed payment involved in using bank-borrowing could improve the performance of the firm by motivating the firm to work hard. This factor resulted in the preference of loan financing over equity financing.
3. The 'easy and fast' factor (Response 21)
4. *Good relationship* with the HP company – This factor is an important factor besides the interest rate, that influences the choice of the source of financing because it contributes to the third factor above (Response 21).

ii) **Incident 2 : Financing the CAD/CAE decision**

Internal equity was used to finance the CAD/CAE decision for the following reason:

ability to fully utilise the available expertise, represents the main weakness of the financial management approach.

Closely related to the above is the high degree of dependency of the decision-making on the owner-manager's subjective judgement. This represents a weakness from the perspective of financial management theory for it exposes the decision-making to the bias in favour of undertaking the investment, especially when there are numerous non-financial benefits accompanying the investment, such as in this incident.

On the other hand, the financial management approach should be acknowledged for its strength in using long-term perspective together with the payback technique. This is because the use of payback alone would overlook the 'hard to quantify' benefit and the long term potential of the investment while using subjective analysis of long-term perspective alone would expose the decision-making to a much higher level of subjectivity.

### **III) Factors Impacting on the Financial Management Approach**

The insight into the full context of the uptake of each capital expenditure by BPLAS helps to derive a better understanding of the factors impacting on the financial management approaches and the decision-making processes underlying the capital investment decision-making. Firm-related and size-related factors explain certain similarities of the financial management approach while factors particular to each project explain the differences in the financial management approaches among the three decisions.

- ***The internal contextual factors***

The utilisation of financial criterion in all the three decision-making incidents despite the difficulty in quantifying the benefit and cost of the investments can be linked to the importance of *financial-orientated motive* to the owner-manager. A clear indication of this is portrayed in the dehumidified dryer decision-making. Even though no stated

*“We wanted to claim an ITAF grant so it would be complicated if we went for HP. Furthermore, there is a clause that HP companies only finance tangible items, things like software were difficult to value. They are reluctant to finance the hardware because the depreciation of these items is drastic.” (BPLAS, 1997: Response 22).*

Response 22 indicates that the following factors had influenced the type of financing chosen:

1. the *less complicated* process;
2. the *difficulty* of getting HP financing.

Due to no emphasis on financial-related factors it is concluded that there is no application of financial management in this financing decision-making incident.

### **The Extent of Traditional Financial Management Application**

#### **i) Incident 1 – Financing the ultrasonic welding machine**

From the above analysis it can be said that none of the tools suggested by the traditional financial management literature in the area of financing decision-making was utilised in this decision-making incident.

However, there are several applications of traditional financial management concepts.

With the emphasis on low financing cost in choosing the source of financing it can be said that the ‘return’ concept is emphasised.

The utilisation of ‘interest rate’ infers the application of ‘cost of debt’ as a proxy for financing cost.

It can also be argued that the concepts of ‘cost of equity’ and ‘opportunity cost’ were also applied. This argument derived from the claim that the owner-manager’s intention to save equity funds for future borrowing in the event of high interest rates is the factor which underpinned the preference of borrowed funds over equity financing when the

interest rate is low. The cost of equity is assigned higher value than the cost of debt because the future interest rate is expected to rise.

The 'after tax' concept is also emphasised in the decision-making with the consideration for capital allowance. However, this concept was applied in a crude manner because the exact comparison of after tax cash flow between lease financing and hire-purchase financing should also include the tax shield on interest payment which is also crucial when comparing the use of debt versus retained earnings.

Finally, the study finds no indication that the important traditional financial management concept of 'financial risk' was afforded any attention in this decision-making incident.

## **ii) Incident 2 – Financing the CAD/CAE system**

There is no sign of any application of traditional financial management concepts, tools and techniques in this decision-making incident .

### **I) Key Factors Impacting on the Financial Management Approach**

It can be said that *expressive rationality* (Hargeave Heap, 1989) has some influence on the firm's financing decision. The use of borrowing can be related to the owner-manager's own desire for an instrument that is accessible and convenient to the firm, has positive psychological effect, reduces tax and increases the firm's profit from the investment. No guidance from the literature was sought in informing his decision-making, instead, the action was taken based on his perception of what he considered as relevant.

It goes without saying that the owner-manager's *knowledge or awareness* on leasing results in some consideration being given to the advantages and disadvantages of leasing compared to borrowing. The emphasis on the 'depreciation tax allowance', nevertheless, can be associated with the owner-manager's *financial-oriented motive* and *concern for tax*.

At a glance, the owner-manager's low *risk taking propensity* seems not to have any influence on the financing decision-making because of the preference for debt-financing

without considering the financing risk. However, with the insight that the payback tool was utilised not only to inform about the viability of investment, but also the financing mode, and that it was done by incorporating the total interest on the initial outlay, the study reveals that the owner-manager's risk-taking propensity does have significant influence on the financial management approach adopted in the financing decision-making. The influence takes the form of making sure that the investment can payback both the project cost and the debt obligation instead of the form theorised by the traditional financial management, which is, affording attention to the level of financial risk the firm is exposed to in using each type of financial instrument.

The overlooking of the financial risk and financial leverage concepts in both of the decision-making incidents may also result from other factors, such as the easy and fast way of financing and the need to maintain liquidity, being more important to the owner-manager. This reality can be associated with the *business risk* in both of the investments to be financed being considered as very low – the ultrasonic welding machine was accompanied by guaranteed contract while the CAD/CAE is accompanied by a 'safety net', provided by a government grant.



## **6.4     CASE 3: CPLAS LTD. (CPLAS).**

### **(A)     The Unfolding Operating and Strategic Context**

#### **I.       Background of the Firm**

CPLAS, established in 1994, is a small plastic company owned and managed by three Malay individuals with professional backgrounds in the fields of engineering and accountancy. With a work force of 35 employees, the firm manufactures a wide range of plastic products with the main customers being overseas firms. Sales for the year 1995 and 1996 are RM500,000 and RM800,000 respectively.

#### **II.      Overview of the Strategic Development of the Firm**

CPLAS Ltd. was formed as a limited company in April 1994 with the equity capital of RM50,000 contributed by three shareholders, a work force of 14 and three hot stamping machines. The firm first started as a subcontractor to a Japanese MNC undertaking metal stamping jobs and was enjoying RM20,000 to RM30,000 of monthly turnover.

As the business grew, the shareholders started making plans to produce their own product. After looking at the costs of various materials for several products they had in mind, they came to a conclusion that the main ingredient of all the products was plastic moulded components. As a consequence of this, six months later, CPLAS ventured into a new line of operation, the plastic injection moulding sector.

Notwithstanding its status as a 'bumiputra' company, CPLAS had no intention of participating in the VDP. The reasons relate to the owners dissatisfaction with the level of value added the firm would be contributing by being a vendor and their aspirations to become independent and to make CPLAS into one of the few 'Malay' end-product manufacturers. The owners are instead keener to penetrate the open market directly, specifically the overseas market.

Funds of RM1million from PUNB, a government back-up institution offering equity type funding to 'bumiputra' SMEs, and RM90,000 of soft loan at an interest rate of 5 percent under the New Entrepreneur Fund scheme was raised to finance the start-up of the new operation. The plastic injection moulding operation commenced immediately after five injection moulding machines were installed in a new factory lot and the numbers of employees were increased to 25.

By the year 1996, CPLAS had manufactured a wide range of end products, including telecommunication equipment, aerospace equipment and security equipment in addition to doing sub-contracting work to take up production to fill the capacity gap.

Alongside the products and process developments that have taken place, CPLAS also undertook some areas of market development. Its customer-base changed from a single local MNC to three major customers, two of whom are overseas corporations.

In mid-1996, the firm expanded its operation by acquiring an injection moulding machine with a bigger tonnage costing RM760,000 to cater for a different product mix.

In the two years of plastic injection moulding operation, the firm has recorded sales of RM500,000 for the year 1995 and RM 800,000 for the year 1996, with eighty percent of the sales in 1996 derived from overseas markets. Around eighty five percent of the firm's production for 1996 is product manufactured according to its customers specifications, while the rest are its own brand-name products which are marketed in the open-market.

### **III. The Internal Operating Environment**

The firm is managed by all three shareholders who are between 30 and 35 years of age. Due to the timing during the fieldwork, the author was not able to interview all owner-managers and thus was not able to understand the characteristics of each one of them. The limited time is thus used to understand the characteristics of the CEO since in

addition to leading the firm he also holds the responsibilities of the firm's finance manager.

a) **The Owner-Managers Characteristics**

The CEO has a degree in **engineering** and worked for seven years in several large manufacturing firms as a project engineer and a production engineer before forming CPLAS. These experiences have exposed him not only to the technical side of the manufacturing process but also the financial side. He claimed that he is **familiar with the NPV appraisal technique** and the time value of money concept. The second shareholder also holds a degree in engineering while the other one has an **accountancy** degree and a few years of working experience.

The **goal** of the CEO in running the business can be described as being underpinned by a combination of nationalistic, racial and personal inspiration. His goal is: "to increase the 'Malay' participation in the industrial sector through manufacturing of high value-added products and to have more control over my destiny". His desire for **control and independence** is further unveiled as he complained of his uneasiness with PUNB's interference with their management style and PUNB's monitoring activities. His reason for not aiming to be under the VDP which derives from his view that the VDP would limit the firm's operating freedom provides further indication of his desire for control and independence.

The CEO can also be described as having an '**optimistic**' and a **high risk-taker** personality for several reasons: (1) quitting a high ranked and high paid post to form a business, (2) targeting the overseas market instead of the VDP and (3) having an intention to start straight away with eight injection moulding machines (due to PUNB advice the firm actually invested in 5 machines and the CEO admitted that they could actually load 3 machines in the first year).

With regard to his accounting and financial management expertise and knowledge-base, the CEO has shown a high level of familiarisation with a wide range of financial

management jargon including the NPV, IRR, cost of capital and effective rate, but has admitted to having no practical experience in applying them as decision-making tools. On the other hand, he revealed a **negative perception** towards ‘textbook’ tools and techniques as depicted in the following assertion:

*“I think what you need in managing small business is experience, good judgement and luck. .. we won’t listen to the bank manager because he himself does not have any actual experience in business .. ‘textbook’ tools and techniques are non-applicable in managing small business.”* (CPLAS, 1996: Response 1)

#### **b) The Firm’s Characteristics**

The firm has a **simple management structure** with each owner holding one functional managerial post. Two clerks are employed to perform the firm’s administrative work and two production supervisors supervise the production side.

The firm is managed in an **informal way**. Workers can freely come to voice any problem straight away to any one of the owner-managers. Informal discussions can take place any time it is felt necessary. Only if decision-making is involved, will a meeting involving all shareholders be held. However, relationships and business dealings with outsiders are done in a formal manner. According to the CEO, the firm is always maintaining the highest level of professionalism when dealing with customers and suppliers.

The strategic decision-making in the firm is achieved through **collective opinion** and discussion. The CEO however admitted that, as a finance manager, he is in-charge of the firm’s capital expenditure and financing decision. He is responsible to take any suggestion by the shareholders pertaining to these decisions forward in terms of analysing and justifying their viability. The final decision to accept or reject an action, however, lies in the collective agreement among the shareholders. According to the

CEO, in the past they have been able to achieve agreement in all incidents of financial decision-making.

The firm is **not guided by any formal written goal or plan**. Indeed, a detailed written plan was drafted at the inception of the firm's operation, but due to the changes that the firm has undergone the plan was never referred back to and the company's objectives were never reviewed. The CEO sees no significance in doing so because of the open-ended changes facing the firm. He also admits that there is no written financial target. But from the discussion with the owner-manager it can reasonably be said that the implicit financial goal is to reduce borrowing and to increase the firm's profit level.

**(B) Analysis and Findings: The Financial Management Approach in Capital Expenditure Decision-Making**

In 1996 the firm undertook one major capital investment project, involving the amount of RM760,000 to acquire an injection moulding machine.

**I. The Nature of the Financial Management Approach**

In mid-1996 a decision to purchase an injection moulding machine worth RM 760,000, which is a higher tonnage machine than was existing in the firm, was made together by all the shareholders. A capital expenditure proposal was prepared and submitted to PUNB, which includes payback analysis, supporting orders and forecasted sales.

The following statements by the firm's CEO reflect the reasons which underpinned the decision to undertake the investment.

*"The new machine enables the firm to manufacture bigger products which have a less saturated and thus less competitive market. Bigger products can give higher profit margins than smaller products because the ratio of each cost to the price charged is lower than that of smaller products."* (CPLAS, 1996: Response 2)

*“Actually, we had already got a ‘purchase contract’ for the product, we can either manufacture it or sub-contract it, but again if you think about making more profit it is better to make it yourselves. And furthermore we can have control over the quality of the product, we can manufacture whatever amount the customers want and whenever they want.” (CPLAS, 1996: Response 3)*

The above responses give a clear indication that the investment was driven by the shareholders’ desire to *increase profit* and a desire for *flexible production* provided by in-house manufacturing. In another assertion, the CEO claims that further reason for undertaking the investment is due to his expectation that the ‘busier and noisier’ factory environment as result of the expansion would increase the *morale of the workers* as well as the owner-managers.

Also claimed in Response 3 is that serious thought on buying the machine was only given following an offer of a contract by its main customer for a product that involves bigger plastic parts. This can be taken to indicate that the existence of ready demand for a product to be manufactured by the machine is another factor that influenced the decision to undertake the investment. The analysis can be taken further to indicate that *the certainty of the turnover* is one of the factors given due attention in this decision-making.

Response 2 hints on the utilisation of product *profit-margin* as the financial criterion and tool to judge the desirability of the investment. The following assertion on what was calculated and analysed prior to undertaking the investment sheds more light on the actual nature of the ‘profit margin’ tool and perhaps other financial criteria, tools and techniques utilised to guide the decision-making selection.

*“We discussed among us ...we didn’t conduct formal calculation. We just did the back-of-an-envelope kind of thing... we looked at the potential contract, we estimated how much profit we can make for each unit.... We cannot predict the actual sales because the market is quite uncertain but with a bit of gut feeling and being conservative on the demand for our product we assume the running*

*time of nine months in a year, we amortised the asset over this figure and calculated the profit. We also did a payback analysis. The payback period was allowed to take as long as 5 years due to fluctuation in business. The project's payback turned out to be 3 years. About the price, we just made a rough estimate of the price, slightly lower than what the competitors are charging.”*  
(CPLAS, 1996; Response 4)

Despite a formal written investment proposal being prepared, the actual decision-making analysis took the form of a ‘back-of-an-envelope’ calculation. The yearly turnover was calculated based on the owner-manager’s gut feel on the *conservative estimate of machine running time*.

The explanation of the owner-manager on how the profit margin was calculated shows that (1) the production cost per unit was derived through a costing activity based on the ‘absorption costing approach’ with the fixed cost being amortised over the quantity of turnover under the above assumption of machine capacity, (2) the total *interest* incurred was added to the investment cost and this sum was amortised over five years to derive the depreciation cost per unit and (3) a five years *depreciation period* was chosen to coincide with the required payback and the loan repayment period.

The explanation of how the payback period is calculated shows *cash flow per unit* was multiplied by the quantity of production based on the assumed machine running time to derive annual cash flows, and total interest is incorporated into the initial outlay.

Considering that businesses in the injection moulding industry have the alternative of sub-contracting the moulding operation, also referred to as renting the machine, the utilisation of cash flow per unit as opposed to the cash flows per hour of machine running time implies that either the incremental cash flows were wrongly calculated or the possibility of renting the injection moulding machine as an alternative action was simply disregarded. The CEO’s earlier claims that ‘flexibility’ and ‘workers’ morale’ are among the reasons the investment was made can be used to conclude that the possibility of sub-contracting is simply ignored or rejected to accommodate for the

intrinsic value of these non-financial benefits. The owners' collective judgement can be said to be the decision-making tool that was implicitly utilised to reject this alternative.

Considering the CEO has given some emphasis on 'market competitiveness' in Response 2, an additional question was raised by the author as follows; "In what way is competitiveness relevant to the decision-making?". The CEO responded:

*"With a less competitive market, we expect that we have a high certainty of achieving our sales target."* (CPLAS, 1996: Response 6)

This response is taken to mean that the 'market competitiveness' was viewed from the financial viewpoint in terms of the 'certainty of sales', one of the elements of *business risk* in the investment (see Brigham, 1995). The investment was regarded by the CEO as having a more certain sales compared to the investment in smaller plastic products. A judgemental strategic analysis can be said to have been utilised to infer the level of the new product's 'certainty of sales' relative to that of the existing products.

### ***Summary of the financial management approach***

The investment decision-making can be concluded to have utilised some form of financial management approach to guide this decision-making incident since there is an indication of the use of financial criteria to judge the desirability of the investment. The financial management approach appears to possess the following characteristics:

- a) Utilises the product 'profit margin' criterion (profit is satisfactory), payback period criterion (payback period is less than the loan repayment period) and 'business risk' criterion to judge the desirability of the investment;
- b) Utilises the 'product profit margin' calculation, that is based on (i) an 'absorption costing' approach and (ii) the depreciation period which is equivalent to the required payback period and loan repayment period, and that



incorporates interest payment in the investment cost, as the tool to measure product profit margin criterion;

- c) Utilises the payback period calculation, that is based on (i) the conservative estimates of sales according to the owner-manager's gut feel, (ii) cash flow per unit calculation and (iii) initial outlay that includes interest payment, as the tool to measure payback criterion;
- d) Utilises subjective strategic analysis on product competitiveness to infer the business risk criterion.

The financial management approach can be concluded as providing only 'partial guidance' to the decision-making. This is due to the non-financial factors, namely the *flexibility* of operation and *employee morale*, having been given some priority in the decision-making which result in the alternative of sub-contracting the 'moulding' operation being implicitly rejected with little quantification, except for the crude justification of lower profit margin.

## **II. The Extent of Traditional Financial Management Application**

The nature of the financial management approach adopted indicates the utilisation of only the payback criterion, tool and technique. The payback tool is slightly different from the traditional payback tool but similar to that adopted in APLAS. Thus the argument on the gap between the adopted concept, tool and techniques and those of the traditional financial management is similar to that made earlier in the APLAS case (see section 6.1 (B) (II)).

The financial management approach also involved the utilisation of the product profit margin, a criterion not within the domain of traditional financial management criterion.

Due to the similarities between the payback tool utilised in this decision-making incident and that utilised in APLAS, issues 1, 2 and 3 in section 6.1 (B) (IV) also represent the **strengths and weaknesses** of the financial management approach adopted in this decision-making relative to the traditional financial management approach.

### III. Key Factors Impacting on the Financial Management Approach

- *The Internal Contextual Factors*

The presence of financial reasons underpin the decision, the limited human information processing capability and the awareness that the future surrounding the investment is unpredictable suggest that the rationality in the decision-making takes the form of either *bounded rationality* or *expressive rationality* or both. Considering the CEO's negative perception toward management based literature, it is argued that expressive rationality was more prevalent. It is the shareholder's judgement which to a large extent determined the motives pursued and the criteria, tools and techniques utilised in the decision-making, not any prescriptive or normative guiding sources. This rationality results in the adoption of a financial management approach that is based on the CEO's conceptualisation of what are the relevant factors and how they are measured and incorporated into the decision-making. An indication of this is the adoption of product profit margin criterion, which is based on the depreciation period specified by the CEO, not the accounting body. Another is the utilisation of the payback calculation that incorporates interest cost. Any gaps between the adopted financial criteria and tools and the traditional financial management criteria and tools can thus be argued to have resulted from the gap between the CEO's judgement and conceptualisation and traditional financial management theory.

It cannot be denied that *bounded rationality* also played some role here. The limited information and brain processing capability might be the factors that led to the negative perception regarding traditional financial management which then led to 'expressive rationality'. Furthermore it can be argued that bounded rationality tempered the decision-making under 'expressive rationality' by shaping the owner-manager's

conceptualisation and search for information in the context of information imperfection and limited information processing capability.

The desire for *independence* and *control* and *self-determination* characteristics of the CEO arguably are other factors that can be linked to the dominance of expressive rationality. This rationality, on the other hand, exposes the decision-making process and the financial management approach to the influence of the CEO's key characteristics as these characteristics either influence the judgement or result from the judgement.

The *profit orientated motive* underlying the decision-making can be argued as one of the contributory factors to the use of profit margin as one of the criteria.

Given the presence of the CEO's *knowledge and awareness* of past application of the NPV technique and TVOM concept in large corporations, the non-utilisation of this technique can strongly be attributed to his *negative perception* toward the application of academic theory, tools and techniques in small business as reflected in his assertion in Response 1. A specific reason given by the CEO for not utilising this technique is the difficulty in determining the inputs to the calculation because of the uncertainty surrounding its estimation. However, considering that the estimates on future sales and profit have been made, with a five year planning period, the validity of this reason is doubted. Further discussion however reveals that the CEO does not possess the *competency* and the *confidence* required to operationalise the NPV analysis. In addition to this, this *negative perception* towards the practicality of this technique can be argued as the main factor constraining any effort of gaining the expertise via training or even learning from books.

The *high risk-taking propensity* of the CEO and other owners arguably has resulted in the utilisation of a required payback period of five years.

Given the awareness of subcontracting the moulding operation as an alternative to purchasing the machine, the importance allocated to the intrinsic value of flexibility and

product quality, two non-financial benefits to be derived from the purchase of additional machinery, are the main factors that leads to the utilisation of product profit margin, instead of profit margin per hour of production and payback period based on cash flow per unit instead of cash flow per hour. Due to this factor, the alternative of subcontracting being disregarded in the final decision-making analysis with the decision to purchase the machine being compared to the alternative of maintaining the firm's 'status quo'. This explains why the product profit margin and cash flow per unit were perceived as the more suitable measures. The incorporation of the intrinsic value of the non-financial benefits in the decision-making analysis in this manner allocates importance to owner-manager's preference as one of the decision-making tools (the tool used to implicitly evaluate the desirability of the sub-contracting alternative) and hence reduces the importance of the financial tools in this decision-making incident.

Apart from the expressive rationality, the dependence of financing decision on investment decision is precisely the influential factor that results in the inclusion of interest in initial outlay calculation.

- ***The External Contextual Factors***

The *availability of sub-contracting* or machine renting service which is a unique attribute of the plastic injection moulding industry is one of the contextual factors that results in the 'flexibility' and other *non-financial benefits* to be derived from owning machinery rather than renting machinery as the important criteria in the decision-making. The shareholders' tendency to lean towards the intrinsic value of these non-financial benefits reduces the significance of financial tools in guiding decision-making.

The *tight labour market* facing the manufacturing sector, and small business sector in particular, can be argued to be the factor underpinning the emphasis given to 'workers' morale' in the investment decision-making. The value placed upon this non-financial benefit, which was to be derived from the acquisition of additional machinery, partly resulted in the possibility of sub-contracting being disregarded, and thus results in the utilisation of cash flow per unit in the payback calculation. In short, the tight

labour market arguably is one of the factors that contributes to the importance afforded to worker's morale and thus is one of the factors that contributes to the biased calculation in favour of the decision to undertake the investment. The nature of the influence of the tight labour market problem on the firm's investment decision-making contradicts what is to be expected—tight labour market discourages capital investment – because of the non labour intensive characteristics of the industry. According to the CEO, only one operator is needed to operate one injection moulding machine. Thus, additional investment is not expected to create or worsen the shortage of labour problem, but instead create a better working environment which would attract the existing workers to stick with the firm.

The inability to forecast sales because of the *uncertainty in the market* results in the use of gut-feel to derive the 80 percent capacity as the expected sales level. Gut-feel provides the channel through which owner-manager's confidence and experience influence the decision-making.

(C)     **Analysis and Findings: The Financial Management Approach in  
Financing Decision-Making**

The only long-term financing decision made in 1996 was in association with the investment described above. Hire purchase financing was utilised to finance 80 percent of the asset cost.

The CEO admitted that the shareholders did not give much thought to the type of financing to use but they were concerned with the *financing cost*. There was no written analysis comparing different types of financing.

The reason given for choosing this type of financing is:

*We used HP (hire purchase) because it is an easy and straight-forward way to finance machinery. Based on the amount of cash available, we resorted to 20*

*percent cash and 80 percent hire purchase arrangement (CPLAS, 1997: Response 7)*

Response 7 indicates that ‘easy’ and ‘straight-forward’ are two qualitative criteria influencing the selection of HP. Insight from the CEO on why HP is considered ‘easy’ and ‘straight-forward’ indicates that it is felt to be easier than shareholders’ equity because of the shareholders insufficient cash. While HP is considered straight forward because it involves only the claim of interest which is fixed, it does not change the ownership structure of the firm and the asset itself is used as the collateral.

Considering that the firm seems to satisfy most of the eligibility requirements for receiving cheap financing, such as the ‘SMI’ status, the ‘bumiputra’ status and being a plastic company, it is questionable that hire purchase at the rate of 6.5 percent above BLR was utilised. A question was raised as to why a cheap government loan was not utilised and effected the following response:

*“Of course we prefer a cheap loan but we already used it once and the loan is still outstanding. We cannot utilise too much loan stock from PUNB as the fund is also for other companies.” (CPLAS, 1997: Response 8)*

Response 8 infers that *interest rate* charged by the different sources of loan is an important factor influencing the decision-making but the *inability to source further cheap loans* left the firm to choose the ordinary HP.

Albeit the CEO is aware of leasing as an alternative financing instrument and has shown a well-informed knowledge of the advantages and disadvantages of leasing as reflected in his comment about leasing in Response 7, at the time the decision was made leasing did not enter into the picture (see response 4).

*“As you may already be aware, leasing falls under expense items of which you can expense out prior to tax calculation vs. equipment purchased though HP or term loans which falls under assets. While a company is allowed to have a*

*capital allowance on asset purchases, once you're in this bracket it can be a lot cheaper to lease than to purchase. As the company progresses and starts to churn out profit coupled with the rapid technological evolution, the trend will be to acquire equipment on a short-term basis by leasing to avoid your technology becoming obsolete prior to zero value of your equipment and to minimise taxable income.” (CPLAS, 1997: Response 9)*

Response 9 indicates that leasing has been implicitly considered as an alternative mode of financing with its ability to minimise taxable income and to avoid technology obsolescence being the major criteria. It is then rejected based on the CEO's subjective justification that the firm's current low level of profit and the early stage of the firm's operation make this factor of a less importance to the firm.

### ***Summary of the financial management approach***

In spite of the lack of financial calculation, it can be argued that some form of financial management is involved due to the utilisation of several financial criteria. The financial management approach can be summarised as the utilisation of the financing cost and taxable income as the criteria to infer desirability of the financing instrument chosen. The financial management approach can be further described as a two stages approach:

1. Reject or accept lease financing as an alternative source of financing based on the CEO's subjective judgement on the 'taxable income' criterion;
2. Select the source of financing based on the 'financing cost' criterion with the interest rate being utilised as the measure for this criterion;

The financial management, however, provides only partial guidance to the decision-making because apart from the financial criteria mentioned in (1) and (2) above, qualitative factors, namely an easy and straight forward way of financing (debt financing does not involve the change ownership structure and in hire-purchase financing the asset is used as the collateral) and the avoidance of obsolescence, also

influenced the outcomes in each of these stages. Furthermore, the CEO's subjective judgement was also being utilised as one of the decision-making tools.

## **II. The Extent of Traditional Financial Management Application**

There is clearly no utilisation of the tools and techniques prescribed in the traditional financial management literature. However, the use of the 'financing cost' criterion gives an indication of the utilisation of the traditional financial management 'cost of capital' criterion and concept, which is consistent with the appreciation of the 'return' concept. Nevertheless, interest rate was utilised as the measure for this criterion, instead of the traditional financial management cost of capital tool.

The utilisation of the interest rate instead of the cost of capital calculation as the decision-making tool reflects that no consideration was given to the 'financing risk' concept in this decision-making incident. There is also no indication of the importance placed on the financial risk concept elsewhere in the decision-making analysis.

## **III. Key Factors Impacting on the Financial Management Approach**

- ***The Internal Contextual Factors***

The use of 'interest rate' as a criterion can be linked to the owner-manager's desire for profit, however his preference for the easy and straight-forward way of financing results in HP being the only source of financing considered. This argument infers that the importance placed to non-financial benefits, result in the financial management approach having only partial influence on the decision-making. Furthermore, the emphasis on the non-financial benefit on lease financing (the avoidance of absences) has encouraged further the use of judgement in the decision-making, which reduced the importance of financial criteria and the adopted financial management approach in the decision-making incident.



Insufficient cash or ‘cash poor’ position is another factor that influences the financial management approach in terms of limiting the alternative sources of financing available to the firm.

Apart from the above, the dominance of all the above factors can be argued to have resulted in the lack of emphasis on the financial risk concept. This phenomenon can also be linked to the CEO’s *high risk-taking propensity*. But, interestingly, discussion with the CEO on the riskiness of using HP compared to self financing reveals that he regards the financial risk in HP is not much different to that in equity financing because in both cases there is a commitment to pay and the asset itself is backing-up the default in the investment. This perception of the CEO’s partly explained the irrelevancy of financial risk in this decision-making incident.

Response 9 indicates that the firm’s low level of profit and the *early stage* of the firm’s operation are some of the factors that cause lease financing not to be explicitly considered as an alternative financing action, despite the presence of the CEO’s awareness and knowledge related to it.

## **6.5      CASE 4 : DPLAS LTD. (DPLAS).**

### **(A)      The Unfolding Strategic and Operating Context of the Firm**

#### **(I)      Background of the Firm**

Established in 1989 by a team of three brothers, DPLAS is a fast expanding precision plastic moulding company specialising in manufacturing plastic automotive components. It is one of the vendors of PROTON, the Malaysian major car manufacturer, operating under the government's pet programme, the Vendor Development Programme (VDP). It is also serving around 15 other local automotive manufacturers and assemblers among which are Parodua, Toyota, Hicom Teck See and MTB. Apart from its injection moulding operation, the firm is also involved in tool and die-making and assembly operations, which make up 15 percent of the recent total products manufactured.

Since the firm commenced its operations, the management of the business has been led by one of the brothers and has been experiencing sound growth in sales. Turnover figures for the years 1994, 1995 and 1996 are RM8.2 million, RM 8.7 million and RM 10.6 million, respectively. Forecast turnover for the year 1997 is RM15 million. The firm currently employs 98 workers.

#### **II.      The Strategic Development of the Firm**

DPLAS commenced operation in 1989 at a time when few businessmen felt the business climate within Malaysia was conducive to development: the country was recovering from a bad recession, was experiencing high levels of unemployment and few commentators saw the potential for growth in PROTON's market share due to its past failures to meet sales targets. Such an operating climate failed to persuade businessmen that the Malaysian government's newly launched VDP programme offered real opportunities. Nevertheless, it was against this back-cloth that DPLAS's owner-

manager, with equal support from his two brothers, launched the business as a supplier of plastic automotive components to PROTON.

DPLAS was incorporated in 1989 as a plastic company by the team of three brothers and in the same year was granted vendor status by MITI for supplying plastic components to PROTON.

The firm commenced its operation by investing in only three moulds at a cost of RM50,000. The owner-manager decided against investing in injection moulding machinery and sub-contracted the moulding operation to another company. The action not to invest in injection moulding machinery was justified by the owner-manager by PROTON's low turnover and activity rates which indicated low demand for its plastic components which DPLAS was to supply.

This balance of activity continued for two years until 1991 when the shareholders decided to start their own injection moulding operation to allow manufacture of their own products instead of sub-contracting them. The decision was made in response to the availability of a government special grant under the New Entrepreneur Fund (TUB) and the growing increase in demand for PROTON's cars. Being a 'bumiputra' company, and involved in the business area supported by the government's pet projects (the national car project and the VDP programme), the firm faced no problems in obtaining the grant. Major investment amounting to RM1 million was undertaken in 1991 whereby only 50 percent of the worth of the grant was to be paid back, with the payment commencing 3 years from the date the grant was awarded.

With injection moulding manufacturing facilities, fully equipped with a high-tech electronic control and monitoring system, *and* a continuously good business record in meeting PROTON requirement in terms of quality, cost and delivery, the firm was able to convince PROTON to grant contracts on new plastic components to DPLAS.

In spite of having a guaranteed market, the owner-manager felt the need to search for other customers within the automotive industry in order to reduce the firm's risk

associated with relying on the PROTON market alone and to take up the production capacity. The owner-manager personally undertook the marketing effort by approaching the local car assemblers. This, together with the good business record and the current government policy on promoting 'local content', enabled the firm to broaden its customer-base and thus increase its turnover whilst at the same time reducing further its risk levels previously associated with over-reliance upon one customer.

The VDP programme provides the strength to the firm because under this programme the firm does not have to face complete competition with other manufacturers as far as the PROTON market is concerned, but only has to compete among very few vendors for new product contracts. As the products supplied by the firm under the VDP fall under the OEM category, as long as the firm is able to satisfy PROTON's requirements, the contract will continuously be granted to the firm with some potential review in the price every year subject to material prices, production volume and 'cost-down' exercises. Hence, it can be said that the competition in PROTON's market can to a great extent be ignored. Being a PROTON vendor also provides the firm with a good image that not only attracts new customers but also financiers. The VDP membership thus provides an 'enabling framework' which allows for build up of track-record, image and relationships.

Increase in demand prompted another major investment of RM1 Million in 1994 to enable the firm to expand its production operations. In addition to this, for each new product sold by the firm, investment in mould and R&D are involved. The firm has also ventured into the mould-making business and assembly services, both forming a cost-cutting strategy and a diversification strategy.

By the end of 1996, DPLAS had become the OEM of 20 automotive plastic parts and components and was serving around 15 customers. Percentage of sales derived from PROTON has been reduced from 100 percent in 1988 to 50 percent in 1997. The increase in annual turnover reached RM10.6 million for the year ended 1996.

### **III. The Internal Operating Context**

Since the commencement of operation, the management of DPLAS has been led by the youngest of the three brothers, the 'owner-manager'. The other two owners are not involved with the management of the firm and have given full authority for shaping of the firm to the owner-manager.

Because of the above operating circumstances, the characteristics of the owner-manager form the pivotal part of the internal operating environment of the firm.

#### **a) The Owner-Manager's Characteristics**

The owner-manager, in his early forties, has an academic and functional background in **engineering**. More than 12 years experience in the production side of several manufacturing firms makes him a highly competent person in this functional area of the business.

The owner-manager's **goals** in joining the business sector are a mix of the following: the desire for a better standard of living or wealth, the desire to increase 'Bumiputra' participation in the Malaysian economy and the desire to contribute to the nation's economic growth by supporting the local industries. There are also several implicit social objectives that emerged from the discussions with the owner-manager- the desire to contribute to the poor, to develop more 'Bumiputra' entrepreneurs and to establish long-term employment and job-satisfaction for his workers.

Reflected in the above objectives and inspiration, the owner-manager can be described as a culturally sensitive, caring and dedicated person. Moreover, he has a strong desire for control and independence and for growing DPLAS into one of Malaysia's more successful 'Bumiputra' companies.

With regard to expertise and knowledge in **accounting** and **financial management**, the owner-manager has demonstrated his abilities in the preparation and understanding of costing and pricing, financial statements, financial forecasting, cash budgeting and financial planning. This is concluded from the author's examination of the financial documents that were prepared by the owner-manager himself. The knowledge and expertise were acquired both formally through a training programme and informally, mainly through experience, reading and interaction with bank managers. Knowledge on costing in particular is derived from his functional background as an engineer. However, the owner-manager has only a basic knowledge of complicated capital-budgeting techniques without a thorough understanding of the concepts underpinning them. Based on the following assertion, the author describes the owner-manager as an accounting orientated businessman.

*"We have profit that we will accumulate to a reserve fund, depreciation that will be accumulated for reinvestment and amortisation that will be reinvested for new moulds."* (DPLAS, 1996: Response 1)

#### **b) The Firm's Characteristics**

DPLAS has a **formal management structure**. The owner-manager heads the management team as the managing director. Under him there are seven departments: the administrative and accounts department, the engineering department, the business development department, the design and development department, the production planning and control department, the quality control department and the production department. Each department is headed by a manager and has several specialised sub-departments. .

Despite the clearly defined management functions, the owner-manager is the only one responsible for initiating the firm's **strategic changes** or **decisions** (such as initiating the ideas of expanding the market, buying new machinery or producing a new product) and deciding on important routine decisions (such as deciding on the amount of material to order and extending any particular customer credit period). The functional

managers' jobs are to implement whatever tasks that have been decided within their functional activities, facilitate the activities in their departments and to furnish the owner-manager with opinion and information related to their task.

It can be said that the firm has a high degree of formality in terms of **strategic planning**. There is a clear written objective, mission statement and three years forecasted sales and cash flows.

A documented 'marketing' **objective** of DPLAS is 'to manufacture and supply products which will meet the customers' specification and remain fit for purpose throughout their specified life'. There is no formal written financial objectives and targets. However, the implicit financial motive of the firm is stated by the owner-manager as to achieve zero gearing.

As already discussed, DPLAS has a wide ranging **customer-base**. Its major customer, PROTON constitutes 50 percent of its total market. The other 50 percent are almost evenly spread over 14 other customers. Nonetheless, it is heavily reliant on the automotive industry as most of its customers are from this industry even though the firm has extended its market activity to the electrical sector.

The firm, being the vendor under the VDP, has secured a long-term contract with PROTON. The nature of the contract makes it the OEM of a range of PROTON plastic components. This results in the firm having a somewhat **secure market** since it does not have to compete with other manufacturers for this market. This also results in the firm having a relatively predictable **short-term demand** since orders by PROTON are placed three months in advance. The owner-manager, however, realises the presence of uncertainty related to this market since PROTON's demand for his products still depends on the demand for PROTON cars, which, like any other products, are subjected to open-market change. Similarly, the sub-contract agreement with other customers provides the firm with some advance orders at an agreed price but long-term demand is largely unpredictable.

**Finance problems** which have been shown by the small business literature to be a typical problem within small business, on the contrary, is not a problem to this firm. The firm instead, is being chased by bank managers offering it a variety of banking facilities and soft loans. The firm, however, currently has a policy of minimising the use of borrowed funds. Several factors explain the lack of finance problems in this firm, among which are the firm's status as a vendor, the firm's status as a bumiputra company, the firm's good business *track record and the fact that automotive manufacturers and assemblers are good paymasters.*

**(B) Analysis and Findings: The Financial Management Approach in Capital Expenditure Decision-Making**

In the year 1996, DPLAS undertook one investment in machinery costing RM1 million to acquire new injection moulding machines.

**I. The Nature of the Financial Management Approach**

An investment costing RM1 million to acquire three injection-moulding machines was undertaken in 1996. It was financed by a special leasing type of financing, provided by the Development Bank of Malaysia

A brief proposal was prepared prior to the decision and submitted to the Development Bank. Other than the alternative of not making the investment, no other alternative investment was considered. The objective of the investment is stated as to upgrade the manufacturing capability.

The reasons for undertaking the investment were given as follows:

*"We want to update our machinery because most of our machines are old. We have depreciation for every financial year, so it is time to use the accumulated depreciation to invest in new machines, the latest model."* (DPLAS, 1996: Response 2);



*“Our customers forecast that they will increase orders due to higher demand. So we have to prepare our facilities to meet their demand because they give us good business.” (DPLAS, 1996: Response 3);*

*“The Deutschmark was low at that particular time so we could get a good German machine at lower cost than its normal price.” (DPLAS, 1996: Response 4);*

*“We are in the plastic business and we will stay in that business for a very long time. I believe the basic need for this business is good machinery, with good machines we can produce good products. We then will be able to deliver the best products and services to our customers and business will continue.” (DPLAS, 1996: Response 5).*

The owner-manager claims that no calculation or analysis was made to evaluate the feasibility of the investment. Further probing, however, reveals that prior to the investment, a projected profit and loss statement and cash budget statement were prepared incorporating the implication of the new investment and its financing.

Considering that there is no indication from the discussion with the owner-manager on the utilisation of the payback technique, a technique that is found to be widely utilised in other cases, a question was raised by the author, “Are you not concerned whether the investment could be recovered in a certain time period?”. The response is as follows:

*“If I am buying something else, such as a forklift, something to do with the sub-activity, I would be interested in how long I could recover my investment, but in the case of injection moulding machinery, I don’t really care about this because injection moulding is our principle activity. To survive we have got to upgrade our facility whenever necessary. Like for the airline business, aircraft is the basic need so investment has to be made every now and then.” (DPLAS, 1996: Response 6)*

In-depth analysis of the above and other responses following further probes and prompts suggests the following to be the factors (financial and non-financial) that influenced the decision to undertake the investment.

- The owner-manager's perception that upgrading the firm's manufacturing capability is necessary in order to sustain the firm's long-term development in the plastic injection moulding industry- Based on Responses 4 and 5, it can be argued that this is an important factor contributing to the undertaking of the investment. This perception of the owner-manager can be said to derive from his *strategic perspective* that the core or principle activity of the firm is plastic injection moulding manufacturing. The owner-manager has equated the decision-making situation as similar to that in the airline business whereby the investment in aircraft is one of the necessities in order for the firm to sustain its position in the industry. As the core activity, the injection moulding operation is the main source of profit and income to the firm (in the pricing of or cost breakdown for any plastic component, there is a separate cost allocated to the injection moulding process). It is obvious that if the process can be handled by the firm at a cheaper cost than it would have to pay to an outsider for the service, more profit and cash flows can be generated.

In addition to the injection moulding operation being the core activity of the firm, delivering the *best product and service* to the customers has been emphasised in Response 4 as another reason why the investment in machinery is perceived as a necessity to the firm. Delivering the best product and service was clarified by the owner-manager as to satisfy customer requirement in terms of cost, delivery and quality. Compared to the alternative of sub-contracting its moulding activity to other vendors, upgrading its manufacturing capability according to the owner-manager, would ensure that the firm could achieve *higher customer satisfaction* which is seen as the key to the firm's long-term survival in the plastic industry.

This above argument can be taken to infer that one of the criteria utilised in this decision-making is the investment ability to sustain the firm's long term development

and the tool used to reflect this criterion is the owner-manager's *implicit strategic analysis* in terms of where he feels the organisation's long-term development path should lead *and* based upon his own current understanding of the opportunity and threat in the firm's external operating context –though not based upon any formal strategic analysis. Even though this criterion can be visualised as a financial criterion, in this case it is regarded as a non-financial criterion for no association is made between the criterion and any form of financial dimension.

- The investment cost and the amount of accumulated depreciation – Response 2 indicates that the amount of accumulated depreciation, an accounting reporting entry, is a key measure influencing the decision to undertake the investment in new machinery. The importance of this measure is further reflected in the owner-manager's answer to the probe "What is your action if there is a sufficient amount of additional order to justify the acquisition of additional machine but there is no sufficient accumulated depreciation?": "*I will sub-contract the operation to another vendor. I will not invest more than the depreciation that we have accumulated.*" (DPLAS, 1996: Response 7). The owner-manager recalled several incidents whereby sub-contractors were used because there is no accumulated depreciation to justify additional investment in machinery. In some instances contracts are simply rejected by quoting higher prices because of insufficient capacity. All of the above insight illustrates that the amount of accumulated depreciation is utilised as the controlling tool or as the indicator for the amount of allocation for investment in machinery in each year. This can also be taken to infer that the *investment cost* is a decision criterion adopted in this decision-making process and the decision rule is such that the investment will only be considered if the investment cost is less than the accumulated depreciation.

Information on the accumulated depreciation is derived from a 'fixed asset schedule' which is prepared on a quarterly basis. This schedule, as shown in Exhibit 6.1, gives detailed information on the depreciation of each class of fixed asset.

The reason underpinning the approach of limiting the amount of investment in machinery to the amount of accumulated depreciation is given as "*to avoid too much*

*borrowing because to borrow from the bank, we have got to pay the legal fee and other costs, this costs us a lot of money” (DPLAS, 1996: Response 8).*

Another potential reason for this action is to restore the existing level of asset on the balance-sheet statement, but this reason has been denied by the owner-manager claiming that if this is what he wanted, he would have used hire-purchase rather than leasing to finance the asset.

The above argument implies that the size of the investment cost relative to *accumulated depreciation* is another decision-making criteria utilised in this decision-making incident and that the technique of rejecting the investment if the investment cost is more than the accumulated depreciation is one of the decision-making techniques utilised here.

- *The projected amount of order* exceeding the production capacity of existing machinery – Response 3 indicates that the forecasted increase in the order or turnover volume from the firm’s main customer is one of the important factors influencing the decision to undertake the investment. The ‘sales forecast schedule’ that was presented by the owner-manager shows that the projected sales are derived based on the order placed by the firm’s current and new customers, the past sales trend and some public information on the prospect of the local automotive industry. The owner-manager stresses the importance of being ‘honest’ to himself in forecasting the volume of turnover.

Response 3 also seems to suggest that the desire to satisfy customer demand is one reason motivating the investment. But, given that this motive can also be achieved by taking an alternative action to sub-contract the moulding activity, this desire can be argued as not the motivational factor underpinning the decision to purchase the machine. Response 6 provides a strong justification for this argument. However, having discussed the importance of customer satisfaction to the firm, the increase in demand especially from its major customer, PROTON, would have to a certain extent influenced the decision to undertake the investment, for it demands some attention to be given to

customer satisfaction. The owner-manager admitted that this is true but stressed that the desire to reduce borrowing and borrowing costs is more dominant in influencing the investment decision-making because customer satisfaction could be achieved with additional management effort.

The sales forecast schedule and, specifically, the projected amount of order that exceeds the production capacity of existing machinery is, on the other hand, important to the decision-making for *signalling the need* for an additional machine and as the input to the calculation of the projected *profit and lost statement* and projected *cash flow statement*.

- The relatively low *Deutschmark exchange rate*- This factor can be said to be the main factor contributing to the investment being made at that particular point in time. Even though this factor may signal the presence of another financial tool, in-depth understanding of the owner-manager's reasoning indicates that a simple *strategic analysis* was instead utilised as a tool to infer the presence of the criterion that can be referred as 'added competitive advantage'. The relatively low exchange rate was visualised as providing the firm with the opportunity that increases the firm's competitiveness in the invested activity.
- The firm's overall *profitability and cash flow position* – The preparation of the pro-forma profit and loss statement and cash budget prior to taking the investment gives an indication that the implication of the investment on the firm's profit and cash flow was relevant to the decision-making. But knowing that both of these statements were the requirement for the granting of the loan by Development Bank raises the doubt as to their actual utilisation by the owner manager in guiding the decision-making. Throughout the interview there is no indication that the owner-manager was concerned with the projected profit and loss and that a decision-making rule was imposed based on the profit measure. On the other hand, the firm's projected cash flow seems to be very important to the owner-manager as reflected in the assertion, "*after we check that the accumulated depreciation is O.K, we then check the cash flow. If both are O.K, only then do we proceed*" (DPLAS, 1997: Response 9). However, since the owner-manager

admitted that there is no particular amount of required cash balance imposed in the decision-making analysis, it can be said that *judgement* was utilised to assess whether the resultant or projected cash flow position is satisfactory in order to justify the investment.

Response 8 confirms that the desirability of the investment is measured by the projected cash flow position. It can be said that the *maintenance of the firm's liquidity* is one of the decision-making criteria in this decision-making incident and that the *projected cash flow* serves as another decision-making tool apart from other tools identified in the previous discussion. The decision-making technique related to this criterion and tool is 'to proceed with the investment if the resultant cash flow position is satisfactory'.

### ***Summary of the financial management approach***

The financial management approach adopted in this decision-making can thus be described as having the following characteristics:

- (1) Utilises 'the investment cost less than the amount of accumulated depreciation' criterion and the liquidity criterion;
- (2) Utilises the monthly projected cash flow as the tool to measure liquidity;
- (4) Incorporates uncertainty in the financial management approach by using a conservative estimate of turnover in the projected cash flow calculation.

The following are supporting tools that were utilised in the financial management approach described above: (a) the Sales Forecast Schedule which is based on the customers' orders and the owner-manager's 'honest' estimates of the future orders, (b) the Cash Budget which is derived from the Sales Forecast Schedule and the product costing, and (c) the Fixed Asset Schedule.

The presence of non-financial criterion such as the long term development, customer satisfaction and 'added competitive advantage', however, indicates that the financial management approach provides only *partial guidance* to the decision-making selection. Moreover, the presence of non-financial value-based tools such as the subjective strategic analysis and judgement reduces the significance of financial tools.

## ii. The Extent of Traditional Financial Management Application

The financial management approach adopted in the above investment decision-making process differs totally from the traditional financial management approach.

1. Not a single traditional financial management criterion, tool and technique was utilised in the decision-making processes.

2. *Financing implications* were taken into consideration by allowing the need to minimise the financing cost associated with financing the investment to impose the limit of the amount of investment. Traditional financing management on the contrary does not impose the limit on investment for the sake of reducing borrowing but the influences of financing implications on investment decision-making comes through the 'cost of capital' concept and variable, which inputs into the discounted cash flow techniques. According to the IRR, for example, investment and borrowing should be undertaken as long as the IRR of the investment is more than the cost of capital.

3. The financial management concepts of 'cash', 'timing' and 'risk' were not in any way utilised to guide the decision-making. Albeit cash flow is the main concern in the decision-making analysis, the main concern of the owner-manager is on the firm's projected cash flow and not the investment's incremental cash flow. The financial management approach is merely concerned with the firm's liquidity position, not with the return provided by the investment as inferred by investment's incremental cash flows.

4. The required rate of return or the opportunity cost concept was also not afforded any attention in the decision-making.
5. The amount of accumulated depreciation, an *accounting concept* which has no relationship with the amount, timing and risk of cash flow, was utilised to guide the decision-making.

It can thus be concluded that there is no utilisation of traditional financial management concepts, tools and techniques in the decision-making.

### ***Strengths and weaknesses of the financial management approach***

Having discussed the gap between the traditional financial management approach and the adopted approach, the following are some key strengths and weaknesses of the adopted approach:

1. *The use of accumulated depreciation to impose a capital rationing in machinery investment-*

Accumulated depreciation is an accounting cost allocation entry which does not represent cash flow. Thus, using accumulated depreciation for reinvestment as claimed by the owner-manager does not make sense and would mislead the cash flow position unless the owner-manager has treated the depreciation reported in the cash flow statement as 'real cash flow' and actually put aside some cash to be used for reinvestment. Response 1 seems to suggest that cash flows in each period were separated into 3 components: profit, depreciation and amortisation and each component goes into a different fund for different usage and purposes. Interestingly, the use of leasing to finance the investment gives a contrasting indication. The owner-manager clarifies that the amount of cash for reinvestment was indeed available but the leasing was considered because it is a different version of the 'soft loan' offered by the Development Bank. Thus, he foresaw that the firm is in a better position to save the cash in a fixed deposit and then pay the rental rather than to buy the machine using the



cash. The cash budgeting was prepared not only to satisfy the bank's requirements but more importantly to confirm the firm's cash flow position.

The above insight underpinning the use of accumulated depreciation to guide investment decision-making shows that the financial management approach adopted by the firm bears some strength in terms of achieving the balance between the owner-manager's goal of achieving zero gearing and his desire for customer satisfaction (which includes product quality) and self respect (because of his belief that additional investment in machinery is necessary for a plastic company).

The approach also bears a serious weakness from the traditional financial management perspectives. The intention to reduce borrowing cost and financial risk by limiting the amount of investment results in many investment opportunities being rejected, the situation described as under-investment. Instead, in dealing with borrowing cost, investment should be undertaken as long as the investment could provide a return more than the cost of capital (IRR more than cost of capital and  $NPV > 0$ ) and, in dealing with financial risk, the high financial risk should be accepted as long as the sufficient return can be derived from the investment (the risk and return trade-off concept).

2. *No comparison was made between the incremental cost and incremental benefit of the investment-*

The firm has not applied any tool or technique that compares the incremental cost and incremental benefit. Even the crude technique of comparing total outflow to total inflows was not undertaken. With this the firm may run the possibility of investing in an investment that has a negative net present value and thus has the effect of reducing the level of wealth of the firm.

3. *Viewing the investment from a strategic perspective*

The implicit utilisation of strategic thinking in analysing the decision-making by relating the investment to the firm's key activities, competitive position, customer

satisfaction and flexibility reduces the possibility of investing in negative NPV projects due to not comparing incremental cash outflows with incremental cash inflows. As emphasised by Myer (1984), the short-run deviation from equilibrium (the low exchange rate) and the permanent competitive advantages (for example, the guaranteed vendor agreement) give good indication that the NPV is positive. However, according to him, strategic analyses are also subjected to random error for mistakes can be made in identifying areas of competitive advantage and in spotting out-of-equilibrium conditions. And a further weakness with regard to this is that the owner-manager made no concerted attempt at comprehensively identifying relevant external change process which might confound future development.

### III) Factors Impacting on the Financial Management Approach

- *The Internal Contextual Factors*

It cannot be doubted from the foregoing analysis that *expressive rationality* (Hargreave Heap (1989) dominated this decision-making incident. This is because the underlying desire, reason and reasoning all seem to derive from the owner-manager himself, not from some external normative and prescriptive sources. The owner-manager not having *formal knowledge* on capital budgeting techniques and not following any norm among the businesses in this industry, utilised his own judgement, autonomy and ability to make sense of the situation to determine what is to be achieved from the decision-making and how he should approach the decision-making. The key attributes of the owner-manager, which shape the owner-manager's judgement on how to approach the decision-making, thus provide explanation for the approach and for the non-utilisation of traditional financial management concepts, tools and techniques. With the *uncertainty* surrounding the investment decision-making incident and the limited information processing capability, *bounded rationality* also plays its role in shaping the owner-manager's judgement and hence the financial management approach adopted.

Underpinned by bounded rationality and expressive rationality, the *multiple motives* pursued by the owner-manager are felt to substantially explain the application of the

decision-making criteria 'investment cost must be less than the accumulated depreciation' and 'cash flows must be O.K'. The first rule is imposed on the decision-making to ensure that the trade-off between (i) the desire to sustain the firm's development as a plastic company by upgrading its production capability and (ii) the desire to reduce borrowing are achieved. The owner-manager, utilising strategic analysis and preconceptions, concluded that the investment in machinery will sustain the firm's development over a long period of time. But, considering the burden of borrowing as the result of the investment, a capital rationing is imposed. The second rule was utilised as the other necessary condition to ensure that the decision-making is also in line with the implicit desire for liquidity.

The owner-manager's lack of financial management *knowledge* and financial management *orientation* can be said to influence the financial management approach through its influence on the objectives pursued and the criterion utilised. The desire to reduce financing cost can be associated with the lack of financial management knowledge because with such knowledge the owner-manager should be aware that as long as the IRR is more than the cost of capital, the firm is 'better off' undertaking the investment no matter how it is financed, because the return would cover-up its financing cost. In other words, with the real understanding of traditional financial management approach, the owner-manager would not have pursued this motive but instead utilise the IRR techniques. The lack of financial management knowledge and orientation can also account for the non-existence of wealth creation motive and the non-utilisation of NPV criterion.

The owner-manager's *preconception* that investment in machinery would eventually lead to the firm's long term sustainability in the plastic business can be argued as another factor that has some influence on the financial management approach. This is because by having such a preconception, there is no requirement for him to apply any financial evaluation to determine whether the objective is achievable. The preconception can be said to be the tool guiding the decision-making instead of financial calculation.

The owner-manager's implicit adoption of the *strategic management view* is another factor impacting on the financial management approach utilised. The owner-manager claims that the reason for not using payback period to evaluate investment in injection moulding machines, as would normally be used in evaluating investment in sub-activity, is because injection moulding is his primary activity and the machinery is the basic need of the business (see Response 5). He feels that it is rational to upgrade the production capability whenever it is felt necessary and not to worry about its payback. This underlines that what is important to the owner-manager instead is the right timing of the investment. This then explains why the criterion utilised in the decision-making is firm-related criterion, that is, criterion related to the condition of the firm at that particular point in time (the amount of accumulated depreciation, the exchange rate and the firm's cash flows position) and not investment-related characteristics, such as its payback or NPV, *and* the adoption of strategic perspective, in terms of all relevant external and internal variables which have an impact on the investment.

While the owner-manager's desire to reduce financing cost and financial risk leads to capital rationing, the owner-manager's *accounting orientation* as reflected in Response 1, or more accurately described as his idiosyncratic appreciation towards the accounting concepts of depreciation and amortisation, can be argued as the factor leading to the use of accumulated depreciation information as the guidance to the firm's investment decision-making.

The *vendor status* of the firm can be argued as contributing to this approach by providing the firm with confidence that its market will continue to exist over a long period of time and thus justify the aim for a long-term goal.

It can be argued that the *uncertainty* in Proton's long-term demand and the risk facing the firm because of its reliance on the automotive industry has resulted in the utilisation of the conservative production capacity assumption instead of the forecasted demand figure in the decision-making analysis

While the concern for liquidity in small business as argued by McMahon (1991) is due to cash being a critical scarce resource, it is not clear why this firm which is lacking financing problems would concerned itself with liquidity. The potential explanation to this is that the owner-manager's *desire to reduce bank borrowing* has actually imposed financial constraint on the firm which then explains his concern for liquidity. In other words, the owner-manager's reluctance to use bank borrowing demands that he pay extra attention to the firm's cash flow position so as to reduce the possibility of having to borrow to support its future operation. This argument indicates that the financial management approach is not affected by the lack of financing problem.

- ***The External Contextual Factors***

The nature of the *plastic manufacturing industry*, whereby a range of acceptable standard charges for the use of machines exists and a wide range market for their services exists, ranging from small to large firms, from the household product industry to the heavy manufacturing industry, provides the straight forward justification that investment in the machinery will always provide more inflow than the outflow incurred to purchase the machine if the firm can operate at a certain level of production capacity. The presence of the wide market results in the predisposition among the businesses in this sub-sector that sooner or later the cost will be recovered. This to a great extent contributes to the owner-manager's preconception that investment in machinery will in the long-term result in the firm's sustainability in the industry.

Such a 'mindset' is also probably embedded in a 'way of life' within Malaysia which has become used to, year after year, enjoying fast and high economic growth; that is to say, a 'mind set' which expects growth every year, and thus an unrelenting demand for goods which is there for the taking.

(C) **Analysis and Findings: The Financial Management Approach in Financing Decision-making**

The decision-making pertaining to the financing of the machinery will be analysed to identify the nature of the financial management approach adopted in the financing decision-making.

I) **The Financial Management Approach and the Extent of Traditional Financial Management Application**

As indicated earlier, the investment was financed by leasing financing from the Development Bank. The alternative sources of financing that were initially considered were internal equity and soft loans from the Development Bank. The owner-manager was aware of other types of borrowing available to him but only considered the loan from the Development Bank because of the relatively lower rate of interest. Leasing was initially not considered because he was less familiar with it than he was with borrowing.

At this earlier stage, the owner-manager had decided to choose borrowing from the Development Bank over using the retained earnings for the following reason:

*“The interest rate is lower than what I could earn from keeping my money in a fixed deposit. So it is better to keep the firm’s cash in FD and finance the investment using a loan from the Development Bank.” (DPLAS, 1996: Response 10)*

The lease financing alternative came into the decision-making process when a special Development Bank low rent lease financing package (with the option to purchase the asset at the end of the fourth year at 15 percent of its original price), was recommended by the bank manager to the owner-manager. The owner-manager was also persuaded to

choose this financing because the bank has a much greater available allocation for this type of financing compared to the allocation for term loans. Considering the firm had once utilised the soft loan, the chance of getting cheap financing from the Development Bank was higher if it applied for the lease financing.

Despite the recommendation, the owner-manager did not simply choose the lease financing but made the decision based on analysis described by him as follows:

*“I had compared the financial implications of using this financing against that of using a soft loan. I found that there is not much difference in terms of the amount of money I would have to pay the bank and furthermore the leasing is much cheaper than an ordinary loan.” (DPLAS, 1996: Response 11)*

The owner-manager also indicates that he is fully aware of the technical differences between leasing and borrowing:

*“If the asset is leased, we don’t get investment tax allowance but the rent can be reported as expenses and is a tax deductible expense. We don’t pay any tax right now, so we don’t really bother about this, but we will later. The asset will also not appear in the balance sheet now but after three years, when we exercise the purchase option; we can then report it as our asset. This is not very important to me.” (DPLAS, 1996: Response 12 )*

The above description and responses indicate that the decision to finance the investment using Development Bank lease financing was influenced by the following factors:

- The *interest rate of fixed deposit* – It can be inferred from Response 10 that the rate of fixed deposit was utilised by the owner-manager to represent the cost of using internal funds;
- The *interest rates* charged by banks and financing organisations- The end of Response 11 indicates the interest rates charges of different financing organisations

were compared to each other and the organisation that charges the lowest rate was chosen. This process, however, is simplified since the owner-manager is very much aware of the government soft loan offered through the Development Bank and the firm's status as a Proton vendor provides it with the advantage of having a high chance of getting the financing.

- The *total payment* incurred- Response 11 indicates that the final choice of the type of financing is influenced by the crude comparison between the total amount of payment associated with Development Bank leasing and that with the soft loan. The amount of payment for each type of financing is calculated by adding up the payment due each year and for leasing financing, this includes the purchase price of 15 percent of the asset price. The comparison does not take account of the tax effect.

### ***Summary of the financial management approach***

The financial management approach adopted with regard to this financing decision-making incident can thus be described as a two step approach as follows:

- (1) Utilises the financing cost rate as the criterion, measured by interest rate, to compare the desirability of different sources of debt financing. Chooses the one with the lowest interest rate.
- (2) Utilises the 'total payment' as the tool for measuring financing cost in evaluating the desirability between the cheapest debt financing and the available lease financing. Chooses the one with the lowest 'total payment'.

The financial management approach can be said to provide full guidance to the decision-making selection because no other factor outside the domain of the financial management approach discussed above was found to have any influence on the decision to use leasing from the Development Bank, not even the non-financial benefits of lease financing which are known to the owner-manager.



## II) The Extent of Traditional Financial Management Application

At the earlier stage of the decision-making process, the analysis seems to be guided by the *debt ratio* tool since the owner-manager has targeted to reduce its debt ratio. However, in the actual decision-making the choice was then driven by the rate of interest and the cost of each types of financing available to him, regardless of whether it is equity-type financing or debt-type financing.

The financial management approach adopted involves the application of the *rate of interest* and a tool somewhat similar to the *Net advantage of Leasing* as the main tools to guide the choice of the mode of financing. The choice of the source of financing among various types of borrowing and also retained earning is based solely on the interest rate with retained earnings or internal equity being associated with the cost equals to the fixed deposit rate. This was followed by the choice between the best source of borrowing (the soft loan) and the leasing financing which can be said to be based on a non-discounted version of the *Net Advantage of Leasing* (NAL) technique. This technique involves comparing the total payments or total cash outflows expected to be incurred for each type of financing against one another and leasing is chosen if the total cash outflow associated with it is less than that associated with borrowing. This criterion, except for not using the discounted cash flows, is similar to the NAL criterion. The actual calculation utilised is much simpler than the NAL calculation because in addition to not discounting the cash flows/payments, tax implications were not incorporated.

No other traditional financial management tools and techniques were utilised.

The decision-making seems to be solely based on the 'return' concept, with no consideration being given to the 'financial risk' concept. Internal funding was compared against outside borrowing only on the basis of their costs without due consideration to their influence on the firm's degree of financial risk. Even though financial management literature associates the earlier attempt to reduce the debt ratio with the attempt to reduce financial risk, the insight from the owner-manager on why this is to

be achieved shows that the main concern is with the financing cost, not financial risk (Response 7). There is no indication that the financial risk concept was given any attention throughout the decision-making analysis.

The assigned of financing cost equivalent to the normal bank borrowing rate to equity financing indicates the 'cost of equity' concept to some extent was appreciated.

It is also worth noting that the approach taken is diverse from the 'pecking order approach', the approach found by Norton (1991 in McMahon, 1992) to be widely utilised among small businesses in his study. Because instead of preferring to use internal funding as much as possible before debt is used, DPLAS preference was based on the cost of financing regardless of the financing type.

## **II) Factors Impacting on the Financial Management Approach**

It can be said that the financing decision-making is guided by the implicit objective to minimise the financing cost. As the result of the owner-manager's limited cognitive capability coupled with his lack of financial management expertise, *bounded rationality* resulted in the rate of interest and total financing cost being the criterion that he believed would guide the decision-making to achieve this objective. The motive and bounded rationality also explain why financial risk and other factors normally given attention in financial decision-making, such as control and flexibility (see McMahon, 1992), were disregarded in this decision-making.

As argued above, the owner-manager's lack of financial management expertise and knowledge base is one factor that influenced the approach taken. In conjunction with this, the owner-manager's *attitude* that the analysis is sufficient for a small business and *lack of appreciation* of the potential contribution of the traditional financial management discipline to small businesses' financial decision-making stopped him from searching for a better tool, either through formal or informal knowledge seeking. This point is made notwithstanding that he has made a great effort in learning about accounting due to his awareness and appreciation towards accounting.

Whilst less concern on financial risk is associated by the literature with the owner-manager's high risk-taking propensity or low risk-aversion (Barton and Mathews, 1989), this conclusion cannot be made here because there is no clear indication from the interview that the owner-manager has high risk-taking propensity.

3. *The firm's characteristics*- The lower business risk due to having a secure market and fairly wide customer-base can be argued as the factor that leads to an approach that pays less attention to financial risk. With the lower business risk, the owner-manager overlooked the possibility of failing which then resulted in financial risk being ignored in the decision-making.

4. *The degree of risk involved in the decision-making* – The absence of emphasis on financial risk in the financing decision-making analysis can be associated with the financial risk in the context of this decision-making being very minimal because of the loan being backed up with the asset itself and the good market for the asset reduces the amount of loss associated with the possible forced sale of the asset in the even of loan default. This argument infers that the asset to be financed influences the relevance of financial risk in the decision-making.

## **6.6      CASE 5: EPLAS LTD. (EPLAS)**

### **(A)      The Unfolding Strategic and Operating Context of the Firm**

#### **I.        Background of the Firm**

Established in 1992, EPLAS is a 'non-bumi' medium sized firm involved in the manufacturing and supplying of plastic electrical and electronic components. Sales totalled RM8 million in 1996 of which 50 percent derived from two Japanese MNCs and 50 percent from several local companies. The firm is currently employing 118 employees and is managed by its major shareholder.

#### **II.      Overview of The Strategic Development of the Firm**

In 1992, EPLAS was formed and incorporated by a team of four Malaysian Chinese shareholders. The highest proportion of the shares however are owned by one of the shareholders who has actively managed the firm from its early stage of development. The other three shareholders, who are friends of the owner-manager, only contribute capital to the firm and delegate all the rights to manage the firm to the owner-manager.

The shareholders saw the expansion in the manufacturing sector and the lack of participation of SMI in the plastic injection moulding business (due to its capital intensive nature) as the opportunity for them to venture into this area of business. With high confidence, the owner-manager resigned from his job as an electrical engineer and tapped into the business.

With four injection moulding machines and 60 employees, EPLAS commenced its operation by taking sub-contracting jobs from several small and medium size firms. Income takes the form of machine charges on the use of its machines. According to the owner-manager this is a normal start for an injection moulding firm since its lack of track record constrains it from convincing bigger firms to appoint it as their vendor.

Considering that the return from sub-contracting works with small and medium firms is minimal and unpredictable, the firm aimed to do more than this. In 1993, the firm managed to get what the owner-manager called, the first 'real' customer, an American multinational company based in Hong Kong and located in Malaysia from whom the firm won the contract to supply plastic casings for telecommunication equipment.

The risk of over-relying on one major customer coupled with the tremendous growth that was taking place in the electronic and electrical industry caused the owner-manager to search for new customers in this promising industry. By the end of 1993, the firm became the supplier of plastic electrical and electronic components for two Japanese MNCs. The owner-manager considered that the firm's appointment as a vendor resulted from the low competition in the injection moulding industry at that point of time and the firm having a good company set-up.

Good relationships with customers and a high degree of customer satisfaction has enabled the firm to sustain its position as the vendor to two Japanese MNCs, despite the increasing level of competition in the industry. One threat that the firm faced is the possibility of the downturn in the global demand for electronic products because orders from its main customers are largely affected by this factor, and furthermore this is something that is totally out of its control. The threat urged the firm to move into the automotive industry, another expanding industry in Malaysia, but did not succeed because the market is already controlled by 'Bumiputra' small and medium firms promoted under the VDP. The owner-manager is now trying to promote the firm to the overseas market.

The above development brings the firm to the current status: a firm equipped with 14 injection moulding machines, employing 118 employees, serving more than 10 customers from the electronic and electrical sub-sector and recording increases in turnover from RM5 million in 1994 to RM6.5 million in 1995 to RM8 million in 1996.

## II. The Internal Operating Context

As the managing director and the only owner-manager, the key shareholder's characteristics form the pivotal part of the internal operating environment of EPLAS.

### (a) **The Owner-Manager's Characteristics**

The owner-manager, in his late thirties, has a diploma in engineering and is a former **electrical engineer**. His involvement with purchasing activities while working as an engineer provides him not only with the experience and knowledge on the **technical** side of production but also in key business dealings, specifically **marketing** and **pricing**.

His main goal in running the business is to increase his **wealth**. Business, he sees as the only route to become wealthy. Apart from this, he is motivated by the intention to take on more **challenging tasks** than provided in his former profession as an engineer.

The owner-manager can be said to reflect high **strategic awareness** attributes. His elaboration on the firm's development which dragged in the more global economic issues facing the injection moulding industry and the electronic and electrical industry (such as the potential decrease in global demand for electrical goods in the near future, the seasonal pattern of the industry, the rise in labour costs that threatens the industry, the Malaysian government's economic policy that opens up opportunity in other industries, such as the multimedia industry and the behaviour of MNCs ) is an indication of this.

The above also gives some indication of the owner-manager having an **entrepreneurial alertness** characteristic (Kaish and Gilad, 1991). The owner- manager seems to update his knowledge on the opportunity and threats facing the firm in an informal way via input from the firm's customers and suppliers, business magazines and newspapers, and then plan for action to interface with them.

With regard to expertise and knowledge in accounting and **financial management**, the owner-manager, albeit, not having undergone any formal training in these areas has demonstrated his abilities in understanding costing and pricing, financial statements, financial forecasting, cash budgeting and financial planning. The **informal knowledge** is gained through management texts and guides. According to the owner-manager, the accounting concepts are not difficult to understand once you actually involve yourself with the business. He, however, has no real understanding of financial management concepts, tools and techniques. Financial management is equated to accounting. Nonetheless, the owner-manager portraying technically-inclined characteristics has a positive attitude towards financial management. According to him, *“it is very important to evaluate financial actions, understand your costs and the consequences of the decision on the firm’s financial position . . . money is always important in business”* (EPLAS, 1996: Response 1).

Finally, the owner-manager has a **positive attitude** towards written financial planning and monitoring. This is implied from the following assertion:

*“Planning is important. I want to know how the firm would look in the next six months if I do what I am doing now. If anything changes, I can easily revise the figures and see the outcome of it and, if it is not too good, I have to plan for something to be done. I don’t like to be caught by surprise. For example right now, I foresee our sales from the electronic and electrical sector will drop, so I have to find other avenues to keep the business going, probably, other markets or other related products. Because the environment changes very fast I need to keep track of the firm’s performance and see how it is different from what was planned.”* (EPLAS, 1996: Response 2)

**(b) The Firm’s Characteristics**

EPLAS has a **formal management structure** with the owner-manager at the pinnacle as the managing director and the general manager, and five departments each headed by a manager. These departments are marketing, production, purchasing, quality control

and accounts. The accounts department is only involved with updating company accounts, credit collection and invoicing.

**Strategic decisions** in EPLAS are initiated and decided by the owner-manager, with some input from the functional managers and without interference from other shareholders. The owner-manager briefs the other shareholders beforehand on the justification for specific actions, and clarifies any doubts they might have about the action.

Even though the owner-manager is in favour of written financial planning, the firm does not have a formal written strategic plan and its strategic changes are not guided by a written strategic plan. Instead, the idea for changes emerges from the awareness of the current business opportunity and environment, and some forms of financial analysis are adopted to guide the action.

As none of the firm's managers has **financial management** academic background and training, the firm does not have expertise and formal knowledge base in this management area. Furthermore, the owner-manager's informal knowledge is limited to cash budget preparation, financial statement preparation, pricing and costing. It can thus be concluded that the firm is lacking knowledge and expertise on traditional financial management concepts, tools and techniques.

Serving two major customers and more than fifteen small customers the firm can be described as having a fairly **wide customer-base**. The owner-manager also claims that the firm receives a high commitment from the two major customers. Apart from this, the firm is involved in a wide range of activities, which include sub-contracting, OEM and assembling, but is heavily reliant on the **electronics market**. The owner-manager however states that the firm is willing to replace this market with other plastic-based markets that have better prospects.

The owner-manager claims that the firm has a **good financial backup** because the shareholders are 'cash rich individuals'. The firm also does not face any financing



problem, as many banks and finance companies are willing to offer all kinds of financing instruments to the firm. The owner-manager, however, claims that the firm does not enjoy any of the government financial incentives, including soft loans.

One final characteristic which distinguishes the firm from other case firms is the firm's active **involvement in currency and fixed deposit investment**. This probably is the reflection of the owner-manager's desire for wealth and a high risk-taking propensity.

**(B) Analysis and Findings: The Financial Management Approach in Capital Expenditure Decision-Making**

In the year preceding the field study, several capital investments were undertaken. Two major investments are analysed in this study. They involve the installation of robotic equipment and the purchase of a new injection moulding machine.

**I. The Nature of the Financial Management Approaches**

**i) Incident 1: Investment in Robotic Equipment**

This decision-making incident involved the choice between the alternative of installing the robotic equipment costing RM200,000 whose function is to pick-up parts, and the alternative of maintaining the manual operation. A brief investment proposal was prepared by the owner-manager and discussed among the shareholders. The aim of the decision-making was specified as to reduce production costs and to achieve a higher customer confidence level.

The following are the owner-manager's reasons for undertaking the investment:

*"The robotic equipment saves labour cost, saves time, reduces rejects, and increases customer confidence level."* (EPLAS, 1996: Response 3)

*“The robotic equipment results in a more consistent production, increases output and provides better quality..”, (EPLAS, 1996: Response 4)*

*“With current labour problems, it is better to depend on robotic equipment. Furthermore this is the trend in the industry, everybody uses robots so to be competitive we also have to use robots” (EPLAS, 1996: Response 5)*

*“There is also some hidden advantage which we cannot quantify; the better quality and the good impression it gives to customers which increases the customers’ confidence level.” (EPLAS, 1996, Response 6)*

The above responses indicate that the investment was motivated by the financial and non-financial benefits of the investment. The financial benefits are the saving in labour cost, the increase in output and the decrease in reject rates, while the non-financial benefits are the better quality products, the increase in customer confidence levels and the reduction in the labour problem. The investment is also motivated by the increased adoption of robotic equipment among other plastic firms, which signals the need for this equipment as one of the competitive elements in the plastic industry.

Notwithstanding the above justifications, the owner-manager felt the need to analyse the desirability of the investment further. He adopted what he called the ‘return on investment’ calculation. To obtain depth of understanding of his conceptualisation of ‘return on investment’ (which the author felt necessary considering the presence of several interpretations of ‘return of investment’ calculations), the owner-manager was asked to illustrate how it was calculated. The owner-manager claims:

*“I tried as much as possible to quantify the benefit and cost of the investment. I found that it can save 3% to 5% of the cycle time, so I figure that the return is 3 percent of the machine cost . . . . on top of this, I can save money in terms of investment tax allowance. This is important because rather than pay higher tax, I might as well use the money to invest in machinery. I think that this is a*

*good return because I can actually get my money back at the end of the second year.” (EPLAS, 1996: Response 7)*

The “3 percent of the machine cost” is rather vague, hence, further clarification is sought on what is meant. The owner-manager clarifies that the ‘machine cost’ in the assertion refers to the cost of operating the injection moulding per hour, not the investment cost. The response clarifies that the ‘return of investment’ is simply the amount of *cash saving* from the investment stated as the percentage of machine cost, not the amount of profit as a percentage of investment as would be portrayed in the financial management literature.

The explanation of how the payback period of two years was derived shows that the turnover figure in the calculation is based on an 80 percent *production capacity* assumption and that *tax saving* on depreciation was included in the calculation

The owner-manager admitted that the calculation only captured two of the benefits of the investment which are the increase in the speed of production and the tax saving on depreciation. Other financial benefits, the decreased reject rate and the reduction in labour cost are not included in the quantitative analysis, because they are relatively more unpredictable and thus difficult to measure. The owner-manager admits that what is calculated is the *minimum return he could be certain of getting* from the investment.

The owner-manager was fully aware of the financial and non-financial benefits that have not being quantified. The answer to the probe on why the ‘customers confidence level’ is important, reveals this non-financial benefit was being valued from a financial perspective:

*“With high customer confidence levels, hopefully we can secure more contracts, make more sales and profit for the firm . . . but I don’t know the exact implications of this.” (EPLAS, 1996: Response 8)*

Due to the sufficiency of the 2 years payback period in justifying the investment, no other criterion and calculation was utilised to guide and influence the decision-making.

From the strategic perspective this change in process is not a pre-intended strategic development but emerges from the owner-manager's awareness of the current and future potential benefit of making the investment

### ***Summary of the financial management approach***

The above analysis indicates that the financial management approach adopted in this decision-making incident can be described as follows:

1. Utilises the payback period criterion to judge the desirability of the investment;
2. Utilises the payback tool that is based on the minimum annual cash flow calculation measured by the sum of the cost saving resulting from the increase in the speed of production and the tax saving on depreciation;

The financial management approach can be said to provide full guidance to the decision-making selection because the decision to undertake the investment was not influenced by variables other than those accommodated in the financial management approach, basically because there was no pursuance of non-financial motives (the non-financial benefits are being valued for their financial benefit). However, financial tools are found to provide limited guidance to the decision-making. The utilisation of the payback tool was accompanied by the owner-manager's judgement related to the satisfactory payback period which takes into consideration other financial benefit not considered in the payback calculation

### **ii) Decision 2: Investment in Injection Moulding Machine**

An investment of RM250,000 to purchase additional machinery was undertaken in 1996. A brief proposal was prepared prior to the decision and discussed among the

shareholders. Apart from the alternative of not undertaking the investment, no other alternative investment has been considered.

The main reason for undertaking the investment as reflected in the following response is to reduce the cost per unit of production:

*“We want to reduce the unit cost. To produce an additional unit, we only need to spend on labour, electricity and water. Other costs such as the space and the management cost are fixed since the firm has excess management and resource capacity. Thus by increasing the sales, we reduce the actual cost incurred per unit, thus it gives more profit. This is the situation where we have to expand and create order.”* (EPLAS, 1996: Response 9)

The owner-manager claimed that some forms of calculation were undertaken. They are described as follows:

*“I calculated how many percent of the machine cost per hour I can save by making the investment. Last time our cost was 45 percent, now it is 35 percent. This is better because our profit margin will improve.”* (EPLAS, 1996: Response 10)

*“I calculated how much income the machine can generate every month. Let’s say the charge per hour of RM20. Deducting the direct expenses, only those extra that I have to incur leaves me with something like RM10 profit per hour. I then assumed 80 percent capacity and estimated the amount of income I can get from the machine. On top of this, I added the investment tax allowance and compared the sum to the cost to buy the machine and see how long it takes for me to recover the money.”* (EPLAS, 1996: Response 11)

The above responses indicate that two forms of financial criterion have been utilised by the firm to guide the decision-making. The first is the *marginal profit margin per hour* which is measured by the profit margin to be derived from an additional hour of

production (Response 9). This measure is compared with the existing levels of profit margin and the owner-manager's judgement was utilised to judge the desirability of the investment based on this criterion.

The second financial criterion is the payback criterion. The payback tool used is based on the *after tax monthly cash flows*, which was derived by multiplying the *marginal cash flow per hour* (of machine charge) with *the period of running time in a month*, based on 80 percent production capacity, and adding the tax saving of capital allowance to the after-tax cash flow. The marginal cash flow per hour took account of only the costs that vary with the operation, for these are the only costs incurred during the additional operation. This is similar to the marginal costing approach except that *depreciation cost* is not included.

The following response indicates that the *norm in the industry* was utilised to judge whether the payback period is satisfactory and thus whether the action should be taken.

*"Of course I prefer to get back the money as soon as possible because I might as well put it in the FD (fixed deposit), but two to three years payback is a normal accepted payback period for this kind of investment and should be fine with me."* (EPLAS, 1996: Response 12)

## **II. The Extent of Traditional Financial Management Application**

### **(i) Incident 1: Investment in Robotic Equipment**

The description and analysis of the nature of the financial management adopted in this decision-making process shows a very limited utilisation of traditional financial management concepts, tools and techniques.

The only traditional financial management tool that was utilised is the payback tool. Yet, two gaps were detected between adopted payback tool and the traditional payback tool:

1. While the traditional payback tool accommodates all the relevant incremental cash flows, the adopted payback tool takes into consideration only cash flows that are more certain, which is the cost saving result from the increased speed of production, and ignores other relevant cash flows, which are more unpredictable and uncertain.
2. Even though the investment tax allowance was taken into account in the calculation of cash flow, the cash flow still does not represent the 'after-tax cash flow' because the tax implication on the cost saving was not accounted for.

The first gap above can be used to support the argument that it is the 'uncertainty' rather than risk which is accommodated in the payback calculation. Based on the conceptual difference between risk and uncertainty suggested by Simon (see Gore 1992), the use of minimum cash flow in the decision-making analysis without trying to visualise the probability distribution of the cash flows resulting from the increase in customer confidence level and the decrease reject rate, refers to a way of accommodating 'uncertainty' in the financial management approach, similar to using the conservative estimate of sales, as practised by APLAS and a few other case firms. For further discussions on the gap between this technique and the prescribed financial management techniques of handling risk, refer to section 6.2 (B) (II).

### ***Key strengths and weaknesses of the financial management approach***

*Utilises minimum cash flow* – This is a way of circumventing the problem of uncertainty in cash flows predictions which threatens the utilisation of financial management approaches and the reliability of such approaches. With this technique there is a possibility that the uncertain portion of cash flow can be ignored, that is when the portion of cash flows that is certain is more than sufficient to justify the desirability and viability of the investment. In the other situation subjective judgement had to take part either in modifying the accept-reject rule or adjusting the cash flows to accommodate the 'uncertain' portion of cash flows.

*Incorporating the investment tax allowance-* Since not a single case firm had accounted for the investment tax allowance in the cash flow calculation, the financial management approach adopted in this decision-making incident should be acknowledged for doing so. This is because the action results in a more accurate measure of cash flow being utilised. However, this action alone does not accommodate all the tax implications of the decision-making, and thus does not result in the utilisation of the more accurate measure of cash flow which is the 'after tax cash flow' because the tax implication of cost saving is not accounted for.

ii) **Incident 2 - Investment in Injection Moulding Machine**

The financial management approach adopted in the investment decision-making reflects on the utilisation of some traditional financial management concepts, tools and techniques.

The *payback period* tools and technique that were utilised bares some similarities as well as differences with the traditional payback period:

1. The derivation of monthly cash flows from *machine charge per hour* instead of from the unit price consistent with the *incremental nature* of the traditional financial management cash flow considering the firm has the alternative of meeting its customers' demand by using subcontractors to mould the parts. This at the same time caters for the possibility of using the machine to only handle the subcontracting work i.e. moulding plastic parts instead of manufacturing the parts.
2. Similar to the first case, the cash flow utilised in the payback technique does not represent the 'after tax cash flow' because only investment tax allowance is included in the cash flow calculation but the tax implication of other benefits was ignored.

Whilst there is no utilisation of other traditional financial management techniques/criterion besides the payback period, the profit margin criterion, a criterion



within the domain of traditional financial management, was given some place in the financial management approach.

The utilisation of the payback criterion, tool and technique indicates that the 'cash flows' concept was much appreciated. Based on Response 11, the payback techniques can be said to be underpinned by the importance placed on the 'time' and 'opportunity cost' concepts. However, from the traditional financial management perspective, this concept is not well incorporated in the analysis because discounted cash flows were not utilised.

As for the concept of 'risk', presumably some attention was afforded to it with the use of payback period criterion. Apart from this, the owner-manager's response, "*we want to target full capacity, but it is safer to assume 80 percent in our analysis*" (EPLAS, 1996: Response 13) infers the conservative estimates of turnover was utilised in the payback technique. Hence, the nature of the appreciation and the incorporation of the risk concept is similar to that of APLAS as discussed in section 6.2 II (b)

## **II) Factors Impacting on the Financial Management Approach**

- ***The internal contextual factors***

The assertion from response 20, "*I think that this is a good return because I can actually get my money back at the end of the second year*" indicates that one of the factors underpinning the use of Payback Period of two years as the decision-making criterion is the owner-manager's desire for high return. In this context, payback is seen as the 'rule-of-thumb' measure to the investment return. This can be taken to imply that *bounded rationality* was in action, influencing the financial management approach.

Based on the bounded rationality, the stated motive to reduce manufacturing cost explains why the amount of cash saving contributed by the investment is one of the important criterion in the decision-making. However, the presence of the uncertainty and difficulty surrounding the prediction of the total amount of cost saving other than

the 'increase in output' results in the adoption of the 'minimum amount of cash saving' criterion instead of the amount of cash saving.

Again based on bounded rationality, the equally important motives to increase customers' confidence level, product quality and the firm competitiveness influence the decision-making approach. The difficulty in measuring the extent to which customer' confidence level, product quality and competition are affected by the investment and their effects on the firm's profit and growth, inhibits any other financial criterion being used. This instead forces the owner-manager to base his final choice of action on judgemental 'cost-benefit' analysis utilising the 'minimum cash saving calculation' as partial guidance.

As for the second decision-making, the stated motive to reduce unit cost leads to the profit margin calculation. However, the implicit motive to recover the investment within a certain time period can be said to have led to the use of the payback criterion together with the profit margin calculation in the decision-making analysis. The minor role of judgement (in deciding whether profit margin is sufficient) is explained by the insignificance of non-financial motive.

The desire for high return is in line with the owner-manager's general *desire for wealth*. The dominance of this financial-related motive relative to non-financial motives is indeed the factor leading to the adopted financial management approach being the main guide to the decision-making. It also explains why non-financial benefits expected from the investment have been considered in terms of their indirect financial benefit.

The *positive attitude towards financial evaluation* is another factor that can be linked to the application of financial management in the decision-making. Interestingly, the owner-manager's *high level of entrepreneurial alertness* does not lead to the non-application of financial analysis and tools as theorised by Kaish and Gilad (1991). In other words, with the informal environment scanning undertaken by the firm, financial tools are still needed to guide financial actions of the firm.

Arguably, the firm's *short-term investment activity* helps in explaining the preference for short payback period. The 'time' factor underpinning the payback tool is of importance to the owner-manager because the sooner the money can be received the faster it can be reinvested. In other words, the owner-manager's awareness and appreciation of the opportunity cost and timing concepts can be said to result in the desire to recover the investment within a specific time and thus utilise the payback period technique.

Considering the presence of a wealth motive, a positive attitude towards financial evaluation and concern for 'timing', it can be argued that the *firm's lack of knowledge and expertise* on the discounted cash flow techniques and their justification are the factors that constrained their application in both of the decision-making incidents. The owner-manager's informal way of learning about financial management may contribute to the above, because the financial management concept of the time value of money is not easily grasped and appreciated via informal ways of learning especially with the presence of confusion between financial management and accounting and the theoretical clash between them. All these once again suggest that 'bounded rationality' is one factor that results in the gap between the adopted tools and the theoretically superior tool, the NPV.

On the other hand, with regard to the decision-making incident relating to investing in additional machinery the owner-manager's familiarity with the machinery and the less complex change situation due to most benefits being in the form of 'direct' benefits are definitely the factors that enable the owner-manager to rely solely on the payback tool as the guiding tool.

Finally, the utilisation of 'profit margin' as one criterion can be associated with the owner-manager's *accounting orientation* and lack of understanding on traditional financial management.

While the dominance of the owner-manager's financial-related motive resulted in the financial management approach providing the main guidance to the decision-making,

the existence of non-financial, qualitative benefits, namely the increased customer confidence level and product quality results in the financial tool being a partial input to the approach, the use of project unbundling (investment is unbundled into the portion with predictable outcome and that with unpredictable outcome) and the relevance of subjective judgement and gut-feel.

In addition to the owner-manager's financial oriented motives, the owner-manager's *financially inclined* characteristic is another crucial factor that leads to the adoption of some form of financial management. Without this characteristic, the owner-manager may have based his decisions solely on his judgement even with the presence of financial motive. This argument is derived from the first decision whereby with the equal importance being placed on both achieving the quantitative motive and qualitative motive, the owner-manager tried his very best to capture the financial benefit in the calculation.

- ***The external contextual factors***

The *complex change* environment (Duncan, 1972) surrounds the investment in Robotics, whereby it involved the change in many interconnected variables, coupled with the *limited brain processing capability* of the owner-manager resulting in the situation close to what Stacey (1996) refers to as open-ended change and what Simon (in Gore, 1992)) refers to as the 'uncertainty'. Even though the owner-manager can foresee some of the consequences of the action, he could not foresee the magnitude of the financial implication of the changes on the firm. This situation resulting from both the external force and internal weakness inhibits any reasonable prediction of such changes which explains why the financial analysis was limited to the one change which has a clear and predictable financial implication while ignoring to quantify the complex portion of the change environment (i.e. the change in the reject rate and the increase in customer confidence level). The owner-manager's awareness of the complex situation, however, results in his judgement being used as a major decision-making tool alongside the financial tool. In other words, the presence of judgement can be associated with the uncertainty surrounding the financial analysis.

**C. Analysis and Findings: The Financial Management Approach in Financing Decision-Making**

Both investments have been financed in the same manner. Letter of credit (LC) was first used and this is followed by using retained profit and 'directors loan', as it was referred to by the owner-manager, to clear the LC within a few months.

The reason for using LC was given as:

*"The bank charges the interest rate of 10 percent. The fixed deposit is just 7 percent so it is better to use shareholders funds and pay them 7 percent. This saved the firm 3 percent and this benefits all the shareholders."* (EPLAS: 1996: Response 14)

The above infers that the investments were both financed by the combination of LC, retained earnings and loan from the shareholders.

The response to the question on why the capital raised from the shareholders is treated as directors' loan instead of additional shareholders equity is as follows:

*"Director loan is easier and faster to raised, it does not involve formality and paper-work, we only want temporary money."* (EPLAS: 1996: Response 15)

**I. The Nature of the Financial Management Approach**

The financial management approach is summarised as involves the utilisation of gap between the interest rate of FD and the interest rate of banks loan as the financial tool guiding the selection between borrowing from bank or from shareholders.

This financial management approach, however, provides only partial guidance to the decision-making because the selection between equity financing and debt financing was

influenced by some non-financial benefits or non-financial factors (the easy and fast way of financing).

## **II. The Extent of Traditional Financial Management Application**

The financial management approach to some extent reflects the utilisation of traditional financial management 'return' and 'cost of capital' concepts. The firm tried to limit the reduction in the return to the shareholders by opting for the short-term loan, the LC, which bares a relatively low cost of financing compared to hire-purchase, and by using retained earnings and 'directors loan', which bare the cost equal to the return on FD. The approach, however, does not make use of the WACC tool as the measure of cost of capital.

There is also no indication of the application of the 'tax-shield' concept. The difference between the tax implication of debt financing and that of equity financing did not seem to enter into the decision-making analysis.

It should also be noted that there is clearly no utilisation and no appreciation of the traditional financial management concepts of 'risk' and 'financial risk'. There is no indication from the interview that the decision to adopt or abandon any source of financing was based on the decision's implication on the firm's level of total risk and financial risk.

## **III) Factors Impacting on the Financial Management Approach**

The owner-manager *desire for wealth* can be associated with the emphasis on the 'return' concept and the utilisation of the interest rate as the main guidance to the decision-making.

The owner-manager *high risk taking propensity* attribute, coupled with, the presence of good financial back-up provided by cash rich shareholders, arguably, are the factors that influence the lack of emphasise on the 'total risk' and 'financial risk', the non

application of the ‘maturity matching’ techniques, the adoption of a ‘aggressive’, high return, high risk, financing strategy and to the ability to consider ‘directors loan’ as an alternative source of financing.

# CHAPTER SEVEN



## CHAPTER SEVEN

### **SUMMARY OF KEY FINDINGS**

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#### **7.1 INTRODUCTION**

In this chapter, the research findings from chapter 6 on the individual case studies and their financial decision-making incidents are summarised to first highlight the key findings of the study and to then form the basis for the conclusions of the study. The discussion is divided in two main components- financial management in investment decision-making and financial management in financing decision-making.

#### **7.2 Financial Management in Investment Decision-Making**

##### **(A) The nature of the financial management approaches**

1. All investment decision-making incidents analysed in this study were found to take the form of informal, 'back-of-an envelope' analysis without a clear, stated financial objective.
2. In all these decision-making incidents some form of financial management approaches are found to be utilised to guide the selection or choice of financial actions. The financial management approaches are each reflected in the application of financial criteria, tools and techniques in justifying the uptake of each financial action.
3. The summary of the financial management approaches adopted in each decision-making incident analysed in the study is as presented in Table 6.
4. It is concluded from Table 6 that the payback period, which is the number of years in which the investment could be recovered, is the most widely utilised financial tool.

Table 6

## The Financial Management Approach Adopted by the Case Small Businesses in Investment Decision-Making

Firm/incident	Financial criterion	Financial tool/measures	Non-Financial tools	Non-financial factor input into financial management approach	Non-financial factor directly influence the selection
<b>APLAS</b>					
injection moulding	product profit margin	product profit margin		-	- desire for expansion flexibility
	payback period	payback calculation		-	- firm's image
<b>BPLAS</b>					
1) dehumidified dryer	'net cash flow'		⇒ judgemental cost-benefit strategic analysis	⇒ customer satisfaction, product quality, flexibility, certainty	-
2) ultrasonic welding	payback period	payback calculation	Subjective judgement		-
3) CAD/CAE	long-term profitability/net cash flow		⇒ Gut-feel Strategic analysis	⇒ product development market development	-
	Payback period	payback calculation	⇒ experience	-	-

CPLAS					
-injection moulding	Product profit margin	product profit margin		-	Flexibility, morale
	Payback	Payback calculation		-	
	Business risk		Subjective judgement	-	
DPLAS					
Injection moulding	Low borrowing	Accumulated depreciation		-	Long term survival
	liquidity	cash budget		-	
EPLAS					
1) Robotic	Payback period	payback calculation		- image - competitiveness - customers confidence	
2) Injection moulding	Profit margin	Marginal profit margin			
	payback	Payback calculation			

5) In depth study of the nature of each of the payback tools and techniques adopted by the case firms shows that they differ from the traditional payback tool and technique (as discussed in financial management texts) and also vary from one investment decision-making incident to another. The different variations of the payback tools and techniques and their strengths and weaknesses discovered by the study are as follows:

a) *Payback tool based on 'cash flow per piece'*- The payback tool used by APLAS (investment in injection moulding machine), BPLAS (investment in ultrasonic welding machine) and CPLAS (investment in injection moulding machine) is based on the calculation of cash flows that are derived by multiplying the sales quantity with what can be called the 'cash flow per piece'. This finding is interesting considering that almost all the financial management texts illustrate the cash flow calculation as the difference between total cash revenue and total cash expenses for each period.

This cash flows calculation will only give a correct measure of monthly or annual cash flows if the 'cash flow per unit' concept is similar to the 'unit contribution margin' concept, which represents the difference between the 'unit price' and 'unit variable cost', thus taking into account only variable costs. Ignoring tax, annual or monthly cash flow is then calculated by multiplying the unit contribution margin by the quantity of turnover, and if incremental fixed cash expenses is involved, the fixed expenses must be deducted or added up to the contribution margin (unit contribution margin multiplied by the quantity of turnover). The correct formula for this calculation is shown in Equation 1:

$$ACF_m = (CM/unit \times S) + F_m \text{-----Equation 1}$$

Where

$ACF_m$  = Annual Cash Flow for year m (before tax)

CM/unit = cash contribution margin per unit

$S$  = annual sales quantity

$F_m$  = incremental fixed cash expenses for year  $m$

However, this study finds that there is a tendency for the businesses that use this technique to miscalculate the cash flow by either overlooking or disregarding the 'incremental fixed cash expenses', or incorporating these expenses via the 'absorption costing' approach. The assertion from the owner-manager of APLAS, "*I calculated how much money I can actually earn from a product by estimating how much money we actually spend to manufacture such a product, things like the material cost, the labour cost and the utility cost. . . . I then multiply the actual profit with the number of units the machine can produce*" (APLAS, 1996: Response 5) gives an indication that incremental fixed cost was not involved in the analysis and that either or both of the shortfalls mentioned above have occurred. Cash flow is simply seen as the direct function of the sales quantity. The absence of treatment for fixed cost in all the payback period analysis in this study, which is reflected in the periodic cash flow being determined by multiplying the 'unit contribution margin' with the turnover quantity without adding fixed cost, is evidenced by this miscalculation.

Apart from this potential shortfall, the strength of this approach of calculating payback period is that it uses readily available information on product costing.

b) *Payback period based on 'cash flow per hour'*

EPLAS, the only firm that did not base its payback calculation on 'cash flow per unit' has instead based its payback technique on 'cash flow per hour'. Monthly cash flow is calculated by multiplying the 'cash flow per hour' with the expected number of hours of machine running time in the month.

This approach is found to be more appropriate in analysing the investment in injection-moulding machinery because of the presence of sub-contracting

services for the moulding operation. The decision not to buy the machine would still derive income because additional sales contract could be taken with the moulding activity being sub-contracted elsewhere. Hence, the incremental cash flows take in the form of the machine charges and the costs of operating the machine. Alternatively, if additional orders cannot be generated, the machine can be expected to generate additional income from sub-contracting jobs. In these circumstances, the incremental cash flows also come in the form of incremental machine charge and its operating costs. Thus, in whatever situation, these are the only relevant items of cash flow. Since machine charge is quoted on an hourly basis, it is wise to use 'machine charge per hour' as the basis for cash flow calculation. By assuming that the machine would achieve a certain production capacity, the calculation of cash flows is further eased because the only input that is required to perform the calculation, apart from the hourly charge and the operating cost, is the number of hours of running time which is easily determined.

It should also be noted that in order to derive a correct measure of incremental cash flow the 'cash flow per hour' must be similar to the concept of 'cash contribution margin per hour', that is, taking only cash variable cost into consideration. But, incremental cash fixed cost, if present, must be accommodated later. The correct formula is given in Equation 2:

$$CF = N (CM/\text{hour}) - FC \text{ ----- Equation 2}$$

Where,

- CM/hour = cash contribution margin per hour  
= hourly rate – hourly variable cost
- FC = incremental annual fixed cash expenses
- C = production capacity assumed
- CF = annual cash flow
- N = the number of hours of running time in a year  
= C x 24 hours per day x 360 days a year

In addition to representing correctly the incremental cash flow, the use of 'cash flow per hour', more correctly referred to as the 'cash contribution margin per hour', has advantages over using product revenue in terms of easing the cash flow calculation and giving a more reliable estimate of cash flow. The reason for this is that this calculation does not require the estimate of the price and the cost of products to be manufactured by the machine, which could be difficult to determine if the investment is not proceeding with incoming orders. Furthermore, the types of product, their prices and their costs are more uncertain compared to machine charge which, according to the owner-manager has been almost fixed over the last five years.

The cash flow based on hourly rate, however, is not applicable in a situation whereby the action of the sub-contracted activity is difficult to source such as in a situation faced by BPLAS with the ultrasonic welding machine and the CAD/CAE investment.

There is also a tendency not to use the 'cash flows based on machine charge' in the decision-making analysis in situations where the owner-managers attach considerable amounts of attention to intangible benefits accompanying the purchase of the machinery, such as an increment in production flexibility and an improvement in the firm's image. In such an incident the available alternative of sub-contracting the product underlying the decision-making is totally ignored, thus the 'cash flows based on product revenue' seems to better represent their incremental cash flow. In depth investigation reveals that this is the main reason underlying the utilisation of the payback tool based on 'cash flow per piece' by CPLAS in evaluating the investment in new injection moulding machines and so is suspected in the case of APLAS.

*c) Could we achieve the 'payback quantity'?*

This technique was utilised by BPLAS in the decision-making incidents pertaining to the investment in the ultrasonic welding machine and CAD/CAE. This payback technique involves calculating the payback quantity, which is the quantity of sales that would enable the project to recover its cost, followed by accepting of the investment if the expected turnover in the required payback period is greater than the payback quantity.

This technique is closely linked to the utilisation of the 'cash flow per unit' concept discussed earlier in the analysis. BPLAS simply calculated the payback quantity by dividing the investment cost by the cash flow quantity. This calculation as discussed earlier, might either have failed to recognise that there is no incremental cash fixed expense or have mistreated the incremental cash fixed expense .

The correct calculation of payback quantity can be formulated by using the 'cash contribution margin per unit' concept discussed earlier and Equation 1.

Letting

IO = investment outlay/cost

T = required payback period

$Q_p$  = payback quantity

CM/unit = contribution margin per unit

= price – variable cost per unit

At payback period,

$$IO = (CM \times Q_p) - \text{total fixed cost in } t$$

Thus at payback period,

$$Q_p = (IO + \text{total fixed cost in } t) / CM \text{ -----Equation 3}$$

Decision rule: Accept the project if expected sales quantity is more than  $Q_p$



The payback quantity is simply the sum of investment cost and fixed cash expenses during the required payback period, divided by the cash contribution margin per unit, that is the difference between price and variable cost per unit.

Equation 7.3 is similar to the accounting 'break-even quantity' formula except that (i) the planning period is taken to be the required payback period instead of one year, and that (ii) it is based on a cash basis instead of an accrual basis.

While the break-even analysis is based on the assumption of a 'cost-volume-profit' relationship being constant over the life of the venture (Freeman and Freeman, 1993), it is important to realise that the payback quantity analysis is based on the assumption of the 'expenses-volume-cash flow' relationship being constant through out the life of the project.

The approach can be seen as a different technique of utilising the payback period. It gives exactly the same accept/reject criterion as the traditional payback period and shares all the weaknesses of the traditional payback period. However, there are several advantages and disadvantages of this approach over the traditional payback approach.

One of its advantages over the traditional payback period is that it involves less steps since it does not require the estimation of the periodic cash flow to operationalise the calculation. The second advantage is that it is based on costing information, which is more readily available to the owner-manager.

On the other hand, the disadvantage lies in the fact that the exact payback period of the investment or project is not known. Another disadvantage is the high possibility of making a mistake by using 'absorption costing' in this approach. Since absorption costing assumes a certain level of production over which the fixed costs are amortised, it is a shortfall to use it on another quantity of production or sales. Last but not least, the time value of money

(TVOM) is much more difficult to incorporate in this technique than it is in the traditional financial management payback technique which means that it is difficult to modify this technique to overcome the weakness of neglecting the TVOM. Except in cases where the sales is constant, the incorporation of TVOM can only be done in a more crude way than that which is undertaken in the Discounted Payback Period technique.

d) *The 'what if' payback technique*

This technique, which involves questioning 'how much should we sell if we want to recover in X time period?', was utilised by APLAS in the decision-making pertaining to the investment in injection moulding machinery. This technique is similar to 'payback quantity' because it too uses the 'payback quantity' as the base tool and uses the same calculation as in equation 7.3. The slight difference is in the emphasis of the techniques. While the payback quantity technique emphasised on whether the payback quantity could be achieved, this technique emphasises on using the payback quantity to set a sales target. Even though this technique seems not to focus on resolving the capital budgeting issue, Scott (in Romano et al., 1988) proposed that such a technique (the 'what if' technique) is probably the best technique in the context where the uncertainty surrounding the prediction of turnover is very high.

A major advantage of the technique is that it reduces the need of capital budgeting analysis for sales revenue forecast and thus it is to be more highly recommended than the ordinary payback technique to be utilised in a context where decision-making is exposed to open-ended change situations. On the other hand, the disadvantage of this technique lies in it being a production-oriented approach, which still exposes the firm to greater risk.

e) *Payback tool that incorporates profit*

This is another version of payback technique application identified in this study. It is found that BPLAS has purposely included some portion of depreciation in its payback analysis by treating depreciation as part of the variable production cost with the intention of accommodating some 'profit', or more accurately referred to as 'return' in the payback analysis.

This technique, at a glance, seems not to match with the payback technique itself because, with the inclusion of profit, the payback period does not seem to measure the time period within which the original investment is recovered. However, by using the concept of 'opportunity cost' or the 'required return' to understand the technique, it is clear that the actual cost involved in the decision-making should also include the opportunity cost for having the money tied up in the investment and the cost for facing the unnecessary risk, in addition to the investment cost. Subtracting some portion of money equal to the owner-manager's allocation of depreciation per unit from the cash revenue is the way BPLAS incorporated the profit or 'return' required during the payback period. The depreciation cost was considered in the contribution margin calculation in Equation 7.3.

Even though the technique can be argued to be a relatively better payback technique than the traditional payback technique because it incorporates the 'opportunity cost' concept, it can be criticised for not having a strong theoretical underpinning because it does not make use of the actual cash flow calculation (since depreciation is not a cash item). The theoretically better technique is the discounted payback approach in which the TVOM concept is also incorporated together with the opportunity cost concept. It has been argued in Case 2 that the inclusion of 'profit' in cash flows and payback calculation shares some resemblance to the 'Discounted Payback' technique and the 'Modified Breakeven Analysis' discussed by Freeman and Freeman (1993).

f) *Payback tool incorporating the financing cost*

Three out of the case small businesses (APLAS, BPLAS and CPLAS) had incorporated the total interest incurred in the initial outlay calculation and thus in the payback analysis, albeit, traditional financial management excludes the financing cost in the cash flow calculation. The reason is clear in that traditional financial management has a theoretically better way of incorporating the effect of financing, namely through the discount rate, while the small businesses not using the discounted cash flows find another means which is more straight forward and understandable to them through incorporating it directly in the cash flow calculation.

The weakness of this technique is that it is not based on the amount of actual incremental cash flows of the investment; the initial outlay plus the total interest is not the actual amount of cash flow incurred by the firm at the inception of the investment and, similarly, the periodic cash flows that do not account for interest cost incurred in that period are not the actual periodic cash flows. On the other hand, the utilisation of the actual amount of cash flows incurred in each period for the payback analysis would result in a more serious problem. More detailed discussion of this was undertaken in Case 1, section (B) (iii). It is shown that the traditional non-discounted payback technique cannot theoretically accommodate the financing implication effectively. It has also been argued that the inclusion of interest in IO, the technique used by several case small businesses, is relatively the best way to incorporate the financing implication in a non-discounted payback approach. However, a better technique within the payback-type domain in terms of accommodating the financing implication is the discounted payback technique because not only can it accommodate the financing cost, it can also accommodate financial risk.

6. The second most utilised tool in guiding the financial decision-making of the case small businesses after the payback period is the *product profit margin*. The

adopted profit margin technique compares the profit margin of the product to be produced by the asset against either that of the existing product or that of the norm in the industry. Profit margin, however, is better seen as a screening tool with it being utilised at the inception stage of the capital budgeting process. Still, it can be considered as a relevant investment decision-making criterion or tool to the small businesses since its value does have some influence over the decision to undertake the investment. The danger of using this tool from the traditional financial management perspective is that some positive NPV project could have been rejected at the screening stage.

7. The study also identified 'investment profitability', rephrased by the author as '*net cash flow*', as a new criterion or concept important in some of the case small businesses under study. It simply represents the excess of total cash inflow over total cash outflow, whereby the positive value is taken to mean that some 'profit' is gained from the investment. The owner-managers do not only want to 'payback' or 'breakeven' but they also want to realise some 'profit' from the investment, in other words, a positive net cash flow. In APLAS the importance of this criterion is reflected in its owner-manager's assertion "so we know that we can make profit after two years" while in BPLAS, the utilisation of 'cost-benefit' gives a similar indication. In these firms, the payback tool provides the 'rule-of-thumb' measure for the net cash flow criterion since the shorter the payback the more certain it is that the 'net cash flow' is positive and the higher its expected value. This is because underlying their payback calculation is the assumption that similar flow of cash will continue beyond the payback period. This finding indicates that the weakness of the payback period tool in terms of ignoring the cash flow after the payback period does not apply in these firms for the assumption has been made that the cash flows will continue after the payback period. The 'net cash flow' criterion is similar to the NPV concept from the aspect that both are interested in the positive 'total profit' of the investment. The major difference between them is in terms of adjusting for the TVOM. The relationship between payback period and the 'net cash flow' criterion can be seen as similar to the relationship between the discounted cash flow and NPV.

8. In all the financial management approaches described above, the adopted financial tools were adjusted for risk via the use of conservative estimates of sales based on the owner-managers' intuition.

9. Based on the following arguments, the study concludes that financial tools provide only partial guidance to the case firms' investment decision-making and that owner-managers' *subjective judgement*, *gut-feel* and *strategic analysis* are equally important in small business financial decision-making.

(a) The utilisation of payback period as a decision-making technique is accompanied by the owner-managers' subjective judgement as to what is the required payback period. In contrast, the NPV technique involves less subjective judgement because the acceptance rule is definite (accept investment if  $NPV > 0$ ). IN EPLAS, for example, the owner-manager's judgement that was utilised to determine the 'satisfactory payback period' takes into consideration the 'hard to quantify' tangible and intangible benefits that are not included in the payback calculation.

(b) In some decision-making incidents, some financial criteria claimed to be utilised are not assessed using financial tools but instead are subjectively assessed using either strategic analysis of the firm's external environment or owner-manager's gut-feel or both. In BPLAS's decision-making incident involving the investment in an ultrasonic welding machine the owner-manager's implicit strategic analysis together with his subjective evaluation of the indirect financial benefit of the intangible benefits of having the asset- the wider customer-base, the flexible manufacturing facilities and the increased customers' satisfaction- were utilised to infer the 'net cash flow' criterion. In CPLAS's decision-making pertaining to the investment in an injection moulding machine, the owner-manager's preference for flexibility and employee morale partially influenced the selection through its influence on the cash flow measure. In DPLAS, the decision-making regarding the investment in an additional injection moulding machine is to a large extent

determined by the CEO's strategic view that, due to the plastic injection moulding being the firm's main activity and due to its competitive advantages in the industry, investment in an injection moulding machine is profitable and is necessary to ensure long term sustainability of the firm in the plastic injection moulding industry. No tool that measures the 'viability' of the investment is deemed important. In all the above decision-making incidents, non-financial tools have their role side by side with financial tools in guiding small business investment decision-making.

**(B) The extent of traditional financial management application**

1) The study shows that in most of the case firms the application of traditional financial management theory, concepts, tools and techniques is limited to the utilisation of the payback tools and techniques and cash flow and risk concepts, but not in its exact form as prescribed by the literature (see the foregoing discussion). There is no indication of NPV technique, the theoretically correct technique, being utilised in any of the analysed incidents and so with other discounted cash flow techniques. As with the 'risk' concept, the study finds that some application of this concept is reflected in (i) the emphasis given by all firms to the 'certainty' of the demand as one of the main factors driving the uptake of their investments and (ii) the use of a conservative estimate of turnover, which resembles the 'certainty equivalent' technique, in all case firms that use payback tool, though the adjustment to the cash flows was made using a simple, subjective risk-adjustment method that is based on intuitive adjustment, not any forms of probabilistic risk analysis. The study finds no measurement of risk within the investment decision-making incidents analysed.

2. The case study on EPLAS reveals the application of the, so called, 'project unbundling' technique as a way of interfacing with investment projects that have both direct, quantifiable benefit and indirect, qualitative benefit. The investment in new robotics was first justified on the basis of the benefit that can be easily estimated alone, which is the increase in sales which resulted from the increase in the speed of production. Since this justification is considered satisfactory, judgement on the potential

indirect benefit derived from increased customer confidence level was only used to further support the investment.

### **(C) Key factors impacting on the financial management approach**

The contextual analysis of each case study indicates that:

1. The motives of the owner-managers have some influence on the financial management approach-

The significance of the owner-managers' implicit financial motives relative to non-financial motives can be argued to have resulted in the use of some forms of financial criteria in their investment decision-making. In APLAS, BPLAS and CPLAS for example, the importance allocated to increasing 'profit' and 'wealth' and limiting the firm's exposure to risk, apart from non-financial motives – to satisfy customer satisfaction and to improve the image of the firm- has led to the utilisation of 'payback' criterion in their investment decision-making. In the case of DPLAS, the financial criteria utilised to evaluate the desirability of its investment in injection moulding machinery can be linked to the owner-manager's motives of maintaining the firm's long term profitability and to reducing the use of bank borrowing. An extreme case that shows the influence of the owner-manager's motives on the financial management approach is the use of 'net cash flow' criterion and 'judgmental cost-benefit' analysis by BPLAS to evaluate the desirability of the investment in a 'dehumidified dryer'. In this incident, it has been argued that the dominance of the financial motive relative to the non-financial motives has resulted in the non-financial benefits of the investment being valued for their financial contribution through the use of 'judgemental cost-benefit' analysis. In EPLAS, even though the improved customer confidence level was mentioned as one important benefit that had been considered besides other financial benefit, it is found that the financial outcome of the intangible benefit is what is of real concern to the owner-manager. This is because of the dominant motive being a financial-oriented motive.



On the other hand, the equal importance of financial and non-financial motives influences the financial management approach in a different way. In the CPLAS case the equal importance of financial and non-financial motives has a direct influence over the cash flow prediction. The analysis shows that the owner-managers' desire for flexibility and employee morale together with their financial-oriented desire have resulted in the utilisation of the payback tool based on 'cash flow per piece' instead of that which is based on 'cash flow per hour' to evaluate the desirability of the investment in injection moulding machinery. Similarly, the utilisation of similar payback tool in APLAS is underpinned by the desire for some forms of non-financial benefit out of owning the machinery, which includes improved firm's image, increased owner-manager's self-satisfaction and increased production flexibility.

The relationship between motives and financial management approaches in the case firms, however, is not conclusive. This is due to the owner-managers' financial motives not being well specified and due to the fact that the motives that were claimed to have underpinned their decision-making are not the actual motives as would be meant in the financial management theory. The study, for example, reveals that the aim to increase the firm's profit was meant by the owner-manager to be the aim to receive a satisfactory level of net cash flow.

- b) The expressive rationality and the owner-managers conceptualisation of wealth influence the financial management approach.

The analysis across all case studies suggests that expressive rationality has a major influence on the financial management approach adopted by small businesses in their investment decision-making. This rationality has lead the owner-manager to explore his own aim and discover his own approach to the decision-making. Interestingly, it was found that the aim of the owner-manager does not differ very much from the normative aim, since wealth seems to be the ultimate aim to most of them. The net cash flow motive is argued as a close resemblance of the wealth motive especially in cases where the owner-manager's required return or opportunity cost and financial cost are taken into consideration. It can be argued that the gap between the 'net cash flow' motive and

the traditional financial management 'wealth' motive lies in the different conceptualisation of the 'net present value' concept underlying them, with the one underlying the 'net cash flow' motive of the case firms being arbitrary while the one underlying the 'wealth' concept being definite using a discounting process. Hence, arguably, the gap in the conceptualisation of the 'wealth' concept between the owner-managers and the financial management theory together with 'expressive rationality' results in the non-application of the discounted cash flow techniques. The expressive rationality implies that to some extent the owner-managers' intuition were consistent with the finance theory

- b) The extent to which the relevant benefits of the investment can be quantified influence the financial management approach.

Financial benefits from an investment can take the form of 'direct' financial benefit, such as increased sales, reduced cost or reduced risk, or 'indirect' financial benefit derived from various forms of intangible benefits, such as increased customer satisfaction, increased flexibility and improvement in the firm's image. It is found that the extent to which the owner-manager can quantify the 'direct' and 'indirect' financial benefits has some influence over the firm's financial management.

The study finds that in the incidents which involve evaluating investment projects in which the values of financial benefits are hardly determined either because of the high uncertainty in predicting any particular 'direct' financial benefit or because most of the financial benefits are 'indirectly' derived from non-financial benefits, financial tools become less significant to the firms. In the dehumidified dryer incident the 'indirect' financial benefit of flexibility, improved firm's image and a few other intangible benefits resulted in the non-utilisation of financial tools while in the 'CAD/CAE' incident, also in BPLAS, the combination of 'direct' financial benefit' and 'indirect' financial benefit resulted in the utilisation of a financial tool side by side with the owner-manager's gut-feel and subjective strategic analysis. Similarly, the use of project unbundling and the combination of financial and non financial tools by EPLAS in the decision-making relating to an investment in an item of robotic equipment is explained

by the difficulty in estimating both the extent of the 'indirect' financial benefit (to be derived from several non-financial benefits, namely the higher customer confidence level) and the 'direct' financial benefit (of reducing reject rate) of the investment.

The difficulty in estimating the financial consequences of an investment can be linked to the complexity of the change situation which involves the change of many interconnected variables (Stacey, 1996).

- c) Basic knowledge on discounted cash flow (DCF) tools has no influence on their application

Considering that some of the owner-managers do have some 'basic' knowledge on NPV and IRR tools, the non-application of these tools in all the case firms gives an indication that 'basic' knowledge on the tools does not significantly influence its application within the small businesses.

On the other hand, considering that there is a lack of real expertise and in depth knowledge on this tool in all the case firms, it can be argued that the lack of real expertise and knowledge of such tools is indeed one of the factors that inhibits the application of discounted cash flow tools in the firms' investment decision-making incidents. This is because the author feels that this characteristic has a high possibility of constraining the firm's ability (i) to have a same conceptualisation of 'return', 'wealth' and 'profit' to the ones which underpinned the discounted cash flow technique, (ii) to understand the underlying concepts and rationale, (iii) to feel confident with using the tools and (iv) to appreciate the tools.

- d) The utilisation of payback tool within most of the case firms has not resulted from any formal knowledge of the tool but is influenced by the owner-managers' own conceptualisation of it being a rational and common sense tool to guide investment decision-making.

This finding is indicated by the lack of formal knowledge on payback tool among some of the owner-managers who utilised the tool (for example, BPLAS and EPLAS), the non-familiarity of some of these owner-managers with the 'payback' terms (for example, APLAS and EPLAS), and the variation of the payback tools adopted by all the firms from that prescribed by the mainstream traditional financial management literature.

The owner-managers' conceptualisation of the adopted payback tools being the rational tool (that is the utilisation of payback tool) in most of the firms can be associated with the low liquidity characteristic of the firms. This study, however, finds that in the case of EPLAS, this association does not hold for the firm has a good financial back-up from its 'cash rich' shareholders. This study proposes that the factor that contributes to the utilisation of payback tool in this firm is the active short-term investment activity of the owner-manager, which results in some appreciation of the time and opportunity cost concept. Given the presence of these forms of appreciation, it is expected that lack of knowledge and expertise on discounted cash flow techniques had constrained their application in this firm, resulting only in the application of a form of payback technique. Yet, it can be concluded that the owner-managers' intuition was consistence with the simplest financial management prescription, the payback criterion.

- e) The risk-taking propensity of the owner-manager influences the financial management approach.

The low risk-taking propensity characteristic of most of the owner-managers in this study can be associated with the use of different forms of risk-adjustment approach in the investment decision-making. This characteristic together with the subjective nature of the risk-adjustment approach, however, may be suspected to cause a shortfall from the traditional financial management perspective in that the attention given to the 'risk' element does not balance the attention given to the 'return' element, in other words, the trade-off between risk and return was not 'properly' made. The owner-managers' low risk-taking propensity may cause 'high' risk projects to be rejected without due consideration to their potential high return.

### **7.3      Financial Management in Growth Oriented Small Businesses' Financing Decision-Making**

#### **(A)      The nature of the financial management approach**

1.          The alternative types of financing considered are limited to the different types of debt financing and retained earnings. The potential use of additional funds from the owner-manager or shareholders was considered in the form of director's loans, a form of debt financing, and not owner's equity.

2.          All of the financing decision-making processes analysed in this study were undertaken in the form of informal, 'back-of-an envelope' analysis without a clear, written financial objective.

3.          Financing cost is found to be a widely utilised financial criterion within these financing decision-making incidents with the before tax interest rate being the most utilised financial tool for measuring the debt financing cost, also referred in this study as the cost of debt.

4.          In the case where internal equity is considered, the equity financing cost too is measured by the interest rate. In one incident in APLAS, the use of retained earnings was implicitly associated with the financing cost equal to the expected interest rate of future borrowing. A similar approach is found to be adopted in BPLAS whereby the low interest rate had encouraged the use of borrowing for the reason that the internal equity or fund could be saved for future use when the interest rate rises. Another approach uses the interest earned from the fixed deposit as the cost for equity financing.

5.          The study also demonstrates the practice using the additional owners capital as debt financing, referred to as the 'directors' loan', instead of equity financing in the firm with cash rich owners. In such a case the interest rate on fixed deposit is utilised as the financing cost of the 'directors' loan'. The higher rate of interest on hire-purchase

financing relative to the interest rate on fixed deposit is used by the owner-manager as the guidance to use additional owners' capital as a loan charged at the fixed deposit interest rate. The firm thus is able to save financing cost, which would eventually benefit the owners.

6. The study also reveals that the type of investment to be financed is also a form of financial criterion that is implicitly utilised in most of these incidents. It is considered as a financial criterion because its implication on the decision-making is visualised in terms of the relative level of total risk born by the owner-managers in financing the investment. There is a tendency to finance fixed-assets with debt due to the lower risk resulting from the ability to use the asset as the collateral for the loan. On the other hand, the owner-managers are more inclined towards the use of equity financing in cases where non-asset based financing is involved as indicated in the financing of the start-up and the CAD/CAE.

7. The study also reveals the application of approach similar to the 'incentive based' approach (Bernanke, 1989) whereby debt financing is chosen for it psychologically influence the owner-manager's to work hard and generate more income to the firm.

8. In all the analysed incidents, financial tools only provide partial guidance since the decisions are also influenced by non-financial factors, such as the easy and fast process of using hire-purchase financing, the complicated process of using additional equity financing, the owner-manager's perception towards bank loans, the norm practises and the difficulty in getting a bank loan.

#### **(B) The Extent of Traditional Financial Management Application**

The findings of the study are summarised as follows:

1. The only application of the financial management theory in the small businesses' financing decision-making is the application of the concept of the 'return',

‘cost of debt’ and ‘cost of equity’ concepts. This is inferred from the owner-managers’ emphasis on the interest rate as the main decision-making factor.

2. There is no application of the ‘cost of capital’ concept and the WACC calculation.

3. There is also no application of the ‘financial risk ‘ concept and calculation.

4. There is little consideration for the ‘after tax’ concept.

**‘ (C) Factors impacting on the financial management approach**

The summary of the findings is as follows:

1. The existence of some kind of implicit wealth-oriented goal underpins the emphasis on financing cost as the decision-making criterion.

2. Various forms of rationality influence the financial management approach

Expressive rationality leads to the owner-manager judgement being used as the main source of guidance of what is to be achieved and what information and factors are relevant for consideration in the decision-making. To some extent, instrumental rationality was involved in all these incidents, with the motive pursued dictating the criterion and factors relevant in the financial decision-making analysis. In some incident, procedural rationality influenced the financial management approach with the influence resulting in the use of norm practice to support the decision to use hire-purchase financing.

3. The low level of business risk results in less emphasis being given to the financial risk concept.

The lack of emphasis on the traditional financial management 'financial risk' in most of the financing decision-making incidents can be associated with the level of business risk of the investment to be financed being low due to either the existence of a guaranteed contract, the owner-managers' confidence in the market or the firm's risk reduction activity.

4. The non application of the risk-return, financial risk and the cost of capital concepts in the case firms' financing decision-making, can be associated with the owner-manager's lack of appreciation and/or the lack of knowledge on these concepts, the characteristic found in most of these firms.



# CHAPTER EIGHT

## CHAPTER EIGHT

### CONCLUSION

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#### 8.1 INTRODUCTION

The research reported in this thesis has made an independent and original contribution to knowledge in two distinctive ways: firstly, it has added to understanding of how financial management is approached in practice in selected growth-oriented Malaysian small businesses. This includes enhanced understanding of the management tools and techniques adopted by small businesses and the unique external and internal contextual factors which impacted on the choice and application of those financial management approaches. Integral to this understanding is the unfolding of guiding insight more appropriately suited to the informing of academicians and management support providers in their approaches to small firm development than the currently ambiguous and theoretically based knowledge revealed by many other studies in this area. Secondly, the study has made distinctive contribution through the development and application of a novel small business research methodology which is based upon the identification and addressing of major pitfalls and weaknesses integral to much existing small business research effort. Its distinct, interconnected features include: i) the conceptualisation of the small business as qualitatively as well as quantitatively different from a large company in order to encapsulate the influence and impact of owner manager- and size-related characteristics and constraints; ii) a ‘total contextualisation’ of small business development activity within which to consider small firm financial management in order to avoid distortion of understanding which can derive from narrow out-of-context selective focusing; iii) consideration of the role and impact of unfolding development context issues such as the part played by history and past decisions on current decision-making and actions, in order to facilitate processual, contextual analysis which transcends reliance upon ‘snapshot’ organisational analysis; iv) the formulation of the total contextual framework for informing case study interview instrument and analytical framework design which consists of component parts based upon existing insight which is empirically verifiable (that is to say, which is

contextualised by understanding of what small businesses do in practice, thereby providing justification of which component inputs to utilise, which to disregard, and how those components used interact); v) the incorporation of relevant decision-making theories as analytical vehicles for identification of key rational and non-rational dimensions underpinning small firm financial management and decision-making; vi) the utilisation of traditional financial management paradigms, models and vehicles as interpretative frames of reference.

The remainder of this chapter concludes the thesis by presenting the summary of the study, discussion on the implications of the study in terms of suggestions and recommendations for small business scholars, consultants and training bodies, and suggestions for future research.

## **8.2 SUMMARY OF THE STUDY**

The study has focused on exploring the nature of financial management approaches utilised by Malaysian growth-oriented small businesses in their investment and financing decision-making, examining the extent of the gap and match between the practice and the financial management theory and identifying factors that explain them.

Several issues underpinned the pursuance of the study. First, the importance of financial resources to businesses, large or small, and the limited financial resources of small businesses, mainly due to their unique finance problem, give an indication that effective management of financial resource is crucial for the small business sector and thus need to be studied. The establishment of financial management as an area of study called for the need to study its present and potential contribution to the management of small businesses. It specifically raised the question of the extent to which traditional financial management tools and techniques which are largely derived based on the large firm model and are heavily dependent on strict instrumental rationality are being utilised and have the potential for utilisation within small businesses. Support for such a study focus also derives from the lack of such study in the context of Malaysian small businesses and from the methodological and conceptual weaknesses of the studies that have been conducted in the U.K.

The fact that some portion of small businesses are prospering and growing and the author's presumption that small business owner-managers are 'rational' individuals or act 'rationally' in their own operating context suggest the potential for the finance discipline to learn from small business practices and to improve 'what people do in practice'. This calls for the need to study beyond the issue of traditional financial management application in small business, to also include the investigation of the actual nature of the financial management approaches and the factors underpinning them. Further justification to the investigation derived from the lack of empirical study into this matter.

The factors impacting on the financial management approaches of small businesses also provide explanation as to the gap between the practice and the theory. This explanation is significant to the study of small business financial management due to the uniqueness of the small business operating context relative to the large firm context upon which the traditional financial management theory, tools and techniques are largely based. The resultant insight in turn informs as to what is 'good' practice' financial management in the small business context.

Upon commencing the study attention was given to the development of a research approach capable of circumventing or minimising the weaknesses and pitfalls of past management and small business research highlighted by the related literature (for example, Bygrave, 1989; Gibb, 1990; Gibb and Davies, 1990; Wyer, 1995; Jarvis, 1996). Discussions on the philosophical issues underpinning research methods linked these weaknesses to the flaws in the 'positivist realist' and 'normativist idealist' camps, the two extreme research philosophical standpoints, and led to the acceptance of the ontological standpoint of 'internal realism' developed by Archer (1988)), as the foundation of the study. This standpoint propounds the inter-subjective construing of reality and the role of fact and value in the construction of knowledge.

Based on 'internal realism', as an integral and essential part of the research approach is the build-up of partial frameworks of insight from existing levels of knowledge to

foothold the research and to clearly spell out underlying values and theories. These frameworks help in raising the relevant research questions for the investigation in the next stage of the study, determining the research method to be adopted in this stage and guiding the analysis of findings. Considering the under-developed nature of the small business financial management area of study, a build-in of the process of incorporating insights from the literature and the world of practice, termed as the 'bootstrapping process', as a formal and integral part of the research approach for the study, was justified to ensure a well-developed conceptual framework. This is then followed by the design of a research method and instrument for the field study and finally, the actual undertaking of the field study.

Three main conceptual sub-frameworks were developed in the 'bootstrapping process'. The first sub-framework, which was built from the insight from the mainstream financial management literature and decision-making literature, conceptualised financial management approaches as the "application of some form of financial criteria, tools and techniques in guiding investment and financing decision-making". At this stage, based on several justifications a decision was made by the author to limit the scope of the study to only the decision-making in the area of fixed asset investment and long-term financing (thus excluding decision-making in the area of working capital and dividend). The second sub-framework, also built from the mainstream financial management literature, conceptualised the traditional financial management approach as 'financial decision-making with the aim of maximising shareholders wealth' and traditional financial management concepts, tools and techniques (only in the area of fixed investment and long-term financing decision-making) as in Table 1. The third sub-framework, whose aim was to guide the understanding of the underlying forces that shape small businesses' financial management approaches, positioned the financial management function in the total context of the small business activity and strategic development. Insights on the small business unique characteristics, the notion of 'rationality', the strengths and weaknesses of traditional tools and techniques and the external operating environment of the small business were incorporated into the framework.

The adoption of the multiple case study research method was justified based on the specific research questions raised by the conceptual framework and the strengths of this method highlighted by the research method literature. Insight from the literature and key informants was then ‘bootstrapped’ to derive a suitable definition of small business for the study, which is “businesses with the number of employees between 10 and 200, and independently owned as per principle decision-making”. 30 firms were first selected from the sample of small businesses in the plastic parts and components sub-sector due to the high involvement of SMEs in this sector and the high growth nature of the sector. The first five firms whose owner-managers were growth oriented and willing to participate were interviewed. Another five firms were chosen from the same sampling frame based on certain characteristics that either resemble or contrast the characteristics of the five firms selected earlier. Follow-up visits were undertaken to upgrade the quality of information and acquire the depth of insight.

Research findings were presented in the form of five individual case studies which includes analyses of each identified investment and financing decision-making incident undergone by the firm to reveal the form of financial management approach, the extent of traditional financial management application and the factors impacting on the financial management approach in each incidents. Only five case studies were presented due to the time constraint and the relative lack of insight on the financial decision-making of the other five case firms.

The summary of key findings were presented in chapter 7

### **8.3 IMPLICATIONS OF THE STUDY**

The findings of the study have important practical implication for policy-makers, training institutions and academics.

For academics in the area of small business and financial management the study has built on the existing literature on small business financial management with major extension to knowledge on the forms of financial management approaches practised in

small business investment and financing decision-making, the different forms of payback tools and techniques adopted by small businesses and the factors impacting on the financial management approaches, and in terms of understanding of the gaps between them and the theoretically based approach.

Prior to proceeding with further summary of the implications of the study regarding financial management approaches relevant to the small growth business and the issue whether there is a need to bridge the gap between existing theory and small business practice, it is important to firstly clarify the author's stand on what is a 'good' financial management practice in the context of small growth businesses.

First of all, the conceptual framework of this study implies that the financial management approach to be suggested needs to be co-ordinated with other aspects of decision-making, such as the setting of objectives and the search for alternatives.

It then follows that there are at least two viewpoints on what is a 'good' financial management practice that can be implied from this study. The first viewpoint takes into consideration the attributes of the small businesses under study having a limited number of shareholders who pursue a set of multiple shared motives which is contrary to the situation in large corporate firms which are owned by large numbers of shareholders with diversity of personal goals and in which the ownership and the management are separated. Support is for the argument that a good financial management practice in the context of a small business is one that evaluates proposed financial actions in the light of their contribution to the achievement of all the shareholders goals, monetary and non-monetary. Jarvis et al.(1996: 43), for example, after discovering the motives underpinning small business cash flow management, suggest that "accountants should develop alternative financial strategies that specifically address the needs of small firms". Alternatively, there is the theoretically based viewpoint which suggests that financial management as a management function should not just guide businesses to achieve whatever are the goals of the owner-manager, but should take a more active role in determining the firms' and the shareholders' economic direction by aiming for the goal of maximising the shareholders' wealth.

It can be argued that the adoption of the financial management approach following the first perspective, even though it seems to well suit the needs and desires of small business owner-managers, has a high possibility of causing destruction to small businesses' and to the owner-managers' wealth by unconsciously ignoring the implications of financial actions on these factors. Maximising or increasing wealth may not be the most important goal to small business shareholders, but destruction in their personal wealth is surely something unwanted to most of them for it leads to financial problems and poverty. In addition to this, the reduction in firms' and shareholders' wealth are expected to have a negative implication on the firms future growth due to the difficulty in raising and attracting additional funds to finance the growth.

On the other hand, the financial management approach which aims only for wealth maximisation, even though it has been argued in the financial management texts to be the best approach, may not be appreciated at all by small businesses because it fails to consider their other motives in financial actions and requires decision-making under the strict 'instrumental rationality' mode which, as shown in this study, is an almost impossible decision-making mode to be undertaken by small businesses. More importantly, the development of the theory is based on the condition that firms are operating in a highly competitive equity market in which the firms failure to maximise shareholders wealth would result in the shareholders pulling their capital from the firms. This condition is in contrast to the situation in the firms under study whereby the major portion of equity capital is raised from loyal shareholders (the owner-manager, his close acquaintances, his spouse or his relatives) who have a high tendency to stick with the firm regardless of how the firm is performing financially. This attribute of the small businesses does not demand maximising shareholders wealth to be placed as the necessary goal of small business financial management.

Based on the above arguments a moderated version of the above two perspectives of financial management is thus suggested by the author for the use in small businesses. It is suggested that financial management approaches in small businesses should take into consideration the achievement of non-financial objectives and at the same time aim for a



satisfactory level of increase in the shareholders wealth. The, so-called, 'wealth satisfying' goal can be argued as a practical goal of small business financial management for it allows the firm to pursue other non-wealth motives and at the same time leave an eye open to the actions' implication on the shareholders wealth.

The application of this approach would require owner-managers to be aware of what they actually desire from the evaluated financial action but would try to achieve this in parallel to their wealth motive, what ever it is. It is a flexible financial management approach since firms could either aim for creating a certain amount of additional wealth, maintaining the existing level of wealth or reducing the shareholders wealth up to a certain minimum limit, depending on the importance of increasing shareholders wealth and firms value to the particular firms. This, for McMahon and Stanger (1995), should depend on the growth level desired by the owner-managers and, for Petty and Bygrave (1991), should depend on how the small business is financed. The higher the level of growth desired by the owner-manager the more emphasis should be given to firms' and shareholders' wealth to enable the firm to retain more earnings and attract more funds. The more the firm depends on outsiders for equity capital, the more emphasis should be given to increasing shareholders wealth. Further support for the suitability of the satisfying goal in small business comes from the finding that the decision-making in small business is mostly made under the 'bounded rationality' mode due to the inability to generate all alternative actions and to process information, hence inhibiting the maximising goal.

What has been argued is that a 'good financial management approach' for growth oriented small businesses should place 'wealth' as one of the important dimensions in financial decision-making. Even though the author has no intention of imposing the large firm theory on small business, this study has led the author to accept the concept of wealth as relevant in small business financial management.

However, whether or not we should then prescribe the traditional wealth-oriented concepts, tools and techniques to small business would depend on whether we should apply a same concept of wealth to large and small businesses, after having

acknowledged some major distinguishing characteristics between them. Or, is there a better measure or are there other factors that influence owners' wealth apart from cash flows, risk, timing and cost of capital which should be taken into consideration in the financial management approach to be suggested to small business. As there is a lack of empirical and theoretical work undertaken in this area of study, it is suggested that this is a research task for future studies, preferably multi-disciplinary studies combining the frameworks from the financial economic discipline and the small business management area of study to incorporate both the theoretical as well as the empirical underpinning.

Nevertheless, despite acknowledging some uniqueness of small business operating context relative to that of large businesses, we can reasonably accept the theory that the wealth of shareholders is reflected by the amount of present and future cash flows to the firm as applicable in a small business setting, and it can reasonably be argued that the shareholders of small businesses must be urged to act rationally in terms of preferring earlier to later cash flows and lower to higher risk. Based on this, arguably the conceptualisation of 'wealth' as 'the net present value of projected cash flows to shareholders' is the best known conceptualisation to be applied in small business. Hence, the cash flows, timing and risk would remain as the basic concepts to be emphasised and as most finance scholars would agree, NPV is the best known tool that measures the impact of an investment action on small business shareholders wealth if it is correctly applied and that the concepts of financial risk and financing cost are the key factors to be emphasised in small business financing decision-making. However, acknowledging the difficulty and potential pitfalls surrounding the application of NPV in large firms, particularly with regard to the measurement for discount rate and incremental cash flows, it is necessary to emphasise the use of APV, option pricing and other discounted cash flows as alternative tools.

Apart from considering the accuracy and the applicability of the tool in measuring wealth, we should also take into consideration the possibility that the shareholders wealth could be derived from a small business via other means than the dividend payment and the increase in the firm's value -the two conventional ways of passing wealth from firms to shareholders. For example, the purchase of an asset from the

owner-manager's relatives at a much higher price than the market price, causes some 'losses' to the firm, but at the same time the owner-manager gains some direct increase in wealth from this action. Similarly, the voluntarily liquidation of the firm could provide wealth to its owner-manger if the firm's assets could be disposed of to the owner-manager or his/her close relatives at below market price. Even though the finding of this study finds that the financial decisions analysed involved no personal hidden benefit to the owner-manager, the forgoing argument suggests that potential conflict between the interest of the firm and the interest of the owner-managers may exist which raises a unique issue- should financial management consider only the benefits to owner-managers or also the benefit to the firm? Can small businesses continue to survive or grow if the wealth of their owner-managers increase at the expense of the decreases in the firms' value? This is similar to the issue raised by Allen (1987: 14) in his remark to the management accountant, "ask yourself where your loyalties lie -with the enterprise or with the people who happen to own the share at present" although the factors underpinning the issue in small firms are different from those in large firms. This issue needs to be discussed further by academics and policy-makers. Policy-makers, for example, may see the more crucial need to promote the growth of the small business industry as a key supporting industry rather than the need to promote personal wealth, and thus should encourage firm-related goals. Nonetheless this study implies that there is a high possibility that this conflict does not exist in growth oriented small businesses and in small businesses with more than one owner.

With the acceptance of a financial management approach that aims for 'wealth satisficing', the evidence from this study that all the decision-making incidents analysed therein are accompanied by the implicit motive to increase the owner-managers' wealth as well as other non-wealth motives implies that, in principle, the financial management approaches adopted by the small businesses are in line with the suggested approach. However, the lack of explicit and well-defined wealth motive implies the need for policy-makers and training bodies to improve small business financial management by increasing the owner-managers' awareness and understanding of the 'wealth' concept.

The wide application of the payback tool among the firms to reflect on assets' ability to increase wealth and the fact that payback is a relatively weaker tool compared to the NPV in terms of incorporating the time value of money, the opportunity cost of funds and the owner-managers required return may then imply the need for academics and government bodies that aim to promote the development and growth of small business to increase the utilisation of NPV in small business. However, the depth of insight gained from this study on the context within which the payback tool is applied provides some justification that the payback tool is in fact the more suitable tool. This pivots on a context which involves (i) low risk-taking propensity owner-managers who were implicitly pursuing the 'wealth increase' motive as well as the 'limited exposure to risk and uncertainty' motive, (ii) an external environment with a high degree of uncertainty due to the firm's inability to secure long-term contracts and the firms exposure to unknowable open-ended changes, (iii) the limited cognitive capability of the owner-managers to process information and (iv) an evaluation of a single conventional-type investment. In such a context, which this study finds to be a 'typical' small business investment decision-making context, the utilisation of short payback period (less than two years) to reduce the firm's exposure to uncertainty, arguably, is a better criterion than NPV. Apart from being simple, short payback criterion provides a better indication that the asset evaluated would increase the shareholders wealth since it is based on the cash flows that are more certain and the weakness of ignoring the 'time value of money' concept has minor implication on the payback criterion reflection of positive wealth contribution of the asset. Furthermore, with the common expectation in all the incidents that similar amount of annual cash flow will still be received beyond the payback period, there is little doubt that the investment with two years payback period is also a positive NPV investment. More importantly, regardless of what we know about the best measure of wealth and the factors that impinge on it, we can confidently expect that the investment with two years payback period will increase the shareholders' wealth. Furthermore, the weakness of having a large portion of potential 'wealth increased' opportunities being rejected due to the short payback rule is acceptable to the owner-managers given the trade-off between the growth in wealth and the level of risk pursued by them.

The variation of payback tools discovered from this study, which have been argued to possess some strength over the traditional payback tool, can thus be prescribed to other small businesses with similar operating contexts. For example, the 'what if' payback technique should be suggested for firms that face high levels of uncertainty, and the use of cash flows calculation that incorporates the opportunity cost of funds and the owners' required return directly should be suggested as a better approach than using the ordinary cash flows calculation. After accepting to account for the opportunity cost in the simple manner, it is expected to be easier for small businesses to appreciate the 'time' concept and to eventually apply discounted cash flow techniques. Whatever, some improvement in financial management practice can be achieved through the incorporation of the opportunity cost concept in the payback tool.

The payback technique, however, is not recommended if the owner-managers' risk-taking propensity is high. This is because in this context there is a high tendency that a long required or cut-off payback period would be used to reflect the high risk-taking propensity. The danger is that, the longer the cut-off payback, the higher is the possibility that the accepted investments do not contribute wealth to the firm since the implication of the time value of money on the wealth measure which is ignored in the payback analysis is greater.

In short, it is recommended that the payback technique be utilised if the owners' risk-taking propensity is low and the NPV technique be utilised if the owners' risk-taking propensity is high. The suggestion refers to the suitability of payback relative to NPV in terms of the crude trade-off between accuracy and applicability and between risk reducing and wealth maximising motives. What is important is that the owner-manager should choose to utilise any of or both of the decision -making tools with a clear understanding of the trade-offs that are involved.

The finding that accounting profit margin, a tool not within the domain of the traditional financial management tools, has been utilised in most of the investment decision-making incidents, raises the question of whether its application in small business financial decision-making should be encouraged or discouraged. The contextual

analysis of the study which indicates that stakeholders of small businesses, such as banks, other suppliers of debt and equity finance, contract providers and customers, are profit orientated and are focusing on accounting profit as a key monitoring variable, gives an indication that accounting measure may have some indirect influence on the 'wealth' of small business shareholders and the 'value' of small businesses. This argument suggests that in such a context a 'good' practice of financial management is the one that includes the utilisation of accounting profit, in addition to the application of wealth-oriented criteria and tools. Allen (1997), in discussing a similar issue in the context of large firms, however, associates the use of profit with short-termism. Further study by academics is needed to investigate the validity of the relationship between wealth and profit and the nature of trade-off that results from using profit and wealth criteria at the same time.

In the area of financing decision-making, the findings that (i) the 'cost of capital' concept is the only traditional financial concept and the interest rate is the only measure for cost of capital utilised by growth small businesses, and (ii) the context of the financing decision-making in these firms is such that there is a limited type of financing, a high tendency to focus on debt-type of financing (to the extent that the owners' capital is also treated as director's loan), no publicly traded share and some gap between borrowing cost and the return from saving, imply that not much can be done by trainers and writers to improve small business financial decision-making by prescribing the theoretically based techniques. On the other hand, the study discovers the technique of comparing the interest rate from fixed deposits with the interest rate of hire purchase financing as a good technique to be practised by small businesses for it reflects the appreciation of the 'return' concept. Some emphasis, however, should be given to the concept of 'financial risk' to enable a better comparison between bank loan and internal equity to be made by the owner-managers in their pursuit for wealth. Nonetheless, the study implies that in some of the small business financing decision-making activities, the overlooking of the 'financial risk' concept is justified by the low financing risk involved in the use of asset based financing and by the tendency among some owner-managers to treat bank loan as the motivation to work hard and to repay the loan. With the recommendation of the 'wealth satisficing' financial management approach, the

small business financing decision-making is allowed to be influenced by non-financial factors as long as the financing implication is incorporated into the financial management approach of the firm's investment decision-making, such as by using residual cash flows or by influencing the discount rate.

The forgoing discussions highlight the importance of 'wealth-awareness' and making the choice of decision-making criteria with a clear understanding of the trade-off between wealth and other factors important to the owner-managers in implementing the 'wealth satisficing' financial management. Built upon the findings that the application of some form of financial management approach among the sample small businesses is influenced by the owner-manager's financial orientated motive/motives expressive rationality which dominates the decision-making mode it is suggested that the attempt to increase the utilisation of a 'wealth-oriented' financial management approach among small businesses should commence with the owner-managers being encouraged to think of wealth and being furnished with some depth knowledge on the wealth concept and its main building blocks (time, cash flows, risk and opportunity cost concepts), and the strengths and weaknesses of the existing financial tools in measuring or reflecting the marginal contribution of an investment to the total wealth of the shareholders. Thus, it is suggested that the focus of financial management training modules and texts on the 'how to do' tools and techniques should be changed or adjusted to cater for this suggestion. The intuitive understanding of the wealth concept and the logic underpinning discounted cash flow techniques are expected to influence the owner-manager's motives, orientation, conceptualisation of wealth and appreciation of the NPV criterion which through expressive rationality lead to the actual application of the criterion. This suggestion is also felt necessary due to the inclination among owner-managers to be accounting or profit orientated.

The finding that the financial management approaches adopted by small businesses in investment and financing decision-making are influenced by their owner-managers 'expressive rationality' implies another challenge to small business financial management trainers and writers for it indicates that their works are in lower demand by the owner-managers because these owner-managers tend to rely on their own judgement

regarding how to approach their financial decision-making. This means that an increase in 'marketing' or 'education' highlighting the significance of justifying financial decisions in terms of wealth creation may be called for.

It is suggested that, apart from academicians and trainers, the government, specifically the Ministry of Entrepreneurial Development (MED), should also undertake the effort to increase the small business appreciation and application of wealth-oriented financial management in order to ensure the long-term survivability and growth of the SMI sector. As recently urged by Bank Negara Deputy Governor, Zetty Akhtar Aziz: "households should consciously manage their savings so as to maximise their returns" (New Straits Times, 1999)- undoubtedly it is more crucial to urge the small businesses to do so.

In addition to the above, the study also suggests that writings and training on small business financial management should provide more discussion and explanation on the estimation of the right inputs into the development of financial tools. This suggestion is implied from the finding that there are pitfalls in the estimate of incremental cash flows and there is a tendency to use the status quo as a comparison instead of other potential alternative situations. This suggestion is also supported by the view among finance scholars that the main weakness of the NPV technique is the difficulty in operationalising the technique (Kaplan in Scott, 1988). The determination of a suitable discount rate which has been an area of difficulty in the context of NPV application in large firms should be the area of discussion by scholars so as to provide the small business with a simple guide as to what rate to use. Discounting at a fairly justified rate, such as the rate of return of an alternative investment (e.g. fixed deposit) with some adjustment to reflect higher or lower risk or the interest rate charged on the use of funds, is better than simply ignoring the discounting process due to the difficulty in determining the theoretically correct rate. In the attempt to resolve this issue, it is important to acknowledge that one of the key continuing difficulties in operationalising the technique is the difficulty which small firms encounter in understanding their fast changing external environment.



The study also implies that the non-application of financial tools in small businesses should not be mislead with the lack of financial management. This is because in most of the cases where financial tools are not applied, the owner-managers did think about 'wealth' in their own terms such as, 'profit' and 'long-term sustainability', and used judgemental cost and benefit analysis and subjective strategic analysis to infer the wealth factor. More importantly the finding that most of the cases involving the non-utilisation of financial tools is underpinned by the difficulty of quantifying the indirect financial benefit of the investment implies: (i) the non application of financial tools should not always be associated with weak financial management, (ii) financial management guides and training modules should focus more on financial decisions involving indirect financial benefits, and (iii) we should admit to the fact that financial tools have little or no contribution in guiding some areas of the financial decision-making. On the other hand, the study implies the crucial contribution of implicit strategic analysis in dealing with such financial decision-making situations. Since it is found that owner-managers tend to think more of strategies than finance, it is suggested that the close link between strategy and financial management could be given close consideration by writers and trainers so as to nurture greater acceptance of the financial management function within the small business and thus narrow the apparent gap between strategy management and financial management. Within this context, the author draws on the findings of studies such as Wyer (1995) which indicate that in an open-ended change situation, small businesses do not always build a pre-determined strategic development path but rather unfold understanding and gradually learn about unknowable impacting change situations. In such circumstances, the potential appears to exist for the small firm utilisation of financial management to support the gradual build up of strategy; for example, financial management approaches and actions used to evaluate and experiment with projects to underpin experimentation in, say, export activity. Given such a scenario, one might expect to find occasions within a small business when financial management underpins formation and implementation of strategy in a pre-determined, intended and planned form. But equally likely is an innovative use of financial management within the small business (including creative, innovative and even idiosyncratic approaches, tools and techniques) in order to facilitate the development and formation of strategy as an *emergent* phenomena.

The study in general provides some indication that the growth of small businesses is not dependent on the utilisation of normative financial management techniques since none of the growth small businesses under study exhibits any application of the techniques. However, one should imply such a relationship only under conditions where growth is viewed in terms of the increase in sales -not any other growth measures since this is the criterion of growth utilised in this study. This relationship and the implication of the study can be considered as irrelevant to the financial management discipline since growth which is of particular concern to the discipline is growth in shareholders wealth contributed by the firm's financial action, on which the development of the DCF techniques are founded. A further word of caution with regard to this is that the study implies nothing about the relationship between the level of any forms of growth and the utilisation and non-utilisation of discounted payback techniques.

The in-depth knowledge revealed by this study suggests that further investigation in the area of small business and financial management utilising qualitative research approaches should be undertaken to complement the knowledge derived from quantitative studies. Moreover, evidence of a gap in the conceptualisation of 'financial terminology and realities' between small business practice and finance theory confirms the potential weakness of utilisation of data collection techniques such as structured mail questionnaires in the study of small business financial management.

Since there is some indication from the study that the owner-managers knowledge on financial management is the key factor influencing the financial management approach of small businesses, the lack of control over the owner-managers knowledge on traditional financial management and the exploratory nature of this study need to be taken forward in the form of experimental design type of research method to enable the confirmation that formal knowledge and training on traditional financial management do or do not have influence over their application in small businesses. It is suggested that similar multiple case study research to this, but involving a sample of small businesses who attended a specially designed course on traditional financial management as suggested in the above section (which includes the understanding of

concepts and logic underpinning the approach), could produce more reliable findings on the extent to which this knowledge influences the financial management approach and on the factors other than formal knowledge that impact on the financial management approach adopted.

A further suggestion for future research relates to the potential adoption of longitudinal research methods to derive real depth of insight and understanding in this topic area, whereby ongoing financial decision-making processes are unfolded and analysed over time. This method has the advantage of reducing the risk of ex post rationalisation in the reported evidence, thus increasing the validity of the study and at the same time providing richer insights into the phenomena under study (Slagmulder, 1997).

It is also recommended that the study is replicated in other plastic manufacturing firms with similar and difference operating context and firms in other manufacturing sectors to access the validity of the finding within and across sectors. This would be the process to follow towards developing a body of empirically verifiable theory of small business financial management.

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## **APPENDIX 1**

### **Small business eligibility to participate in the Vendor Development Programme (VDP):**

- (i) registered as a company under the Companies Act 1965,
- (ii) registered with MED,
- (iii) having shareholder's fund of a minimum of RM100, 000 but less than RM2.5 million,
- (iv) having a minimum of 70 percent Malaysian Equity,
- (v) having skilled workers with relevant line experience,
- (vi) receptive to advisory guidance and consultancy services, and
- (vii) having 3-5 years projection of cash flows, asset acquisitions, technology upgrading and management

## **APPENDIX 2**

### **The Role of Banks and Financial Institution to Support the VDP**

<b>SPECIAL LOAN SCHEMES UNDER BANK NEGARA MALAYSIA</b>		
	<b>New Entrepreneurs Fund</b>	<b>Bumiputra Industrial Fund</b>
<b>Eligibility</b>	100 % bumiputra-owned, companies with shareholders fund of RM2.5 million and below	i. Existing SMEs operating under the 'umbrella' concept. ii. Vendor and sub-vendor approved by MED. iii. Bumiputra individual or corporation with at least 70% bumiputra equity and management control.
<b>Loan amount</b>	Maximum: RM2 million	Maximum: RM2.5 million
<b>Financing Limit</b>	RM2,500,000/ 85% of project cost	RM2,500,000/ 85% of project cost
<b>Interest rate</b>	5.0% p.a.	5.0% p.a.
<b>Repayment period</b>	Maximum: 8 years	Maximum: 8 years
<b>Type of financing</b>	Term loan, overdraft and trust receipt	Term loan and overdraft
<b>Guarantee cover</b>	CGC guarantee up to 80% of unsecured portion	-

(Source: Ministry of Entrepreneur Development and Ui (1997))

### APPENDIX 3

#### **Financial and Credit Facilities for the SMIs Offered by principal Financial Institutions, Commercial Banks and Government Agencies**

<b>INSTITUTION</b>	<b>FINANCE AND CREDIT FACILITIES AVAILABLE</b>
<b>Credit Guarantee Corporation (M) Bhd. (CGC)</b>	Credit Guarantee Scheme, New Principle Guarantee Schemes
<b>Bank Pembangunan Malaysia Bhd.(BPMB)</b>	Loan available to 'Bumiputra' enterprise: <ul style="list-style-type: none"> <li>- Project Loan</li> <li>- Share Financing Scheme</li> <li>- Leasing</li> <li>- Special scheme for Furniture and Food Industries</li> </ul> Industrial Adjustment Fund Small and Medium Industry Promotion Programmes (SMIPP)
<b>Bank Industri Malaysia Bhd. (BIMB)</b>	Engineering facilities <ul style="list-style-type: none"> <li>- New Engineering Projects</li> <li>- Expansion and replacement of existing production line machinery and equipment leasing</li> </ul> Export Credit Scheme for capital goods <ul style="list-style-type: none"> <li>- Supplier's Credit</li> <li>- Buyer's credit</li> </ul> Trade financing facilities
<b>Malaysian Industrial Development Finance Bhd. (MIDF)</b>	MIDF's scheme <ul style="list-style-type: none"> <li>- Project Loan</li> <li>- Machinery Loan</li> <li>- Factory Mortgage Loan</li> <li>- Lease financing</li> </ul> Asean-Japan Development Industrial Adjustment Fund (IAF) Small and Medium Scale Industry Promotion Soft Loan for Modernisation and Automation The Swedish Fund for Environmental Protection and Control
<b>Malaysia Export Credit Insurance Bhd.</b>	Bankers' export Finance Insurance Policy (BEFIP)
<b>Majlis Amanah Rakyat (MARA)</b>	MARA loan schemes
<b>Bank Pembangunan Bhd. Sirim Matrade</b>	Industrial Technical Assistance Fund (ITAF)
<b>All participating financial institutions</b>	Bank Negara Malaysia- Special Loan Schemes <ul style="list-style-type: none"> <li>- Special Fund for Tourism (SFT)</li> <li>- Fund for Food (3F)</li> <li>- New Entrepreneurs Fund (NEF)</li> <li>- Bumiputra Industrial Fund (BIF)</li> </ul>

## **APPENDIX 4**

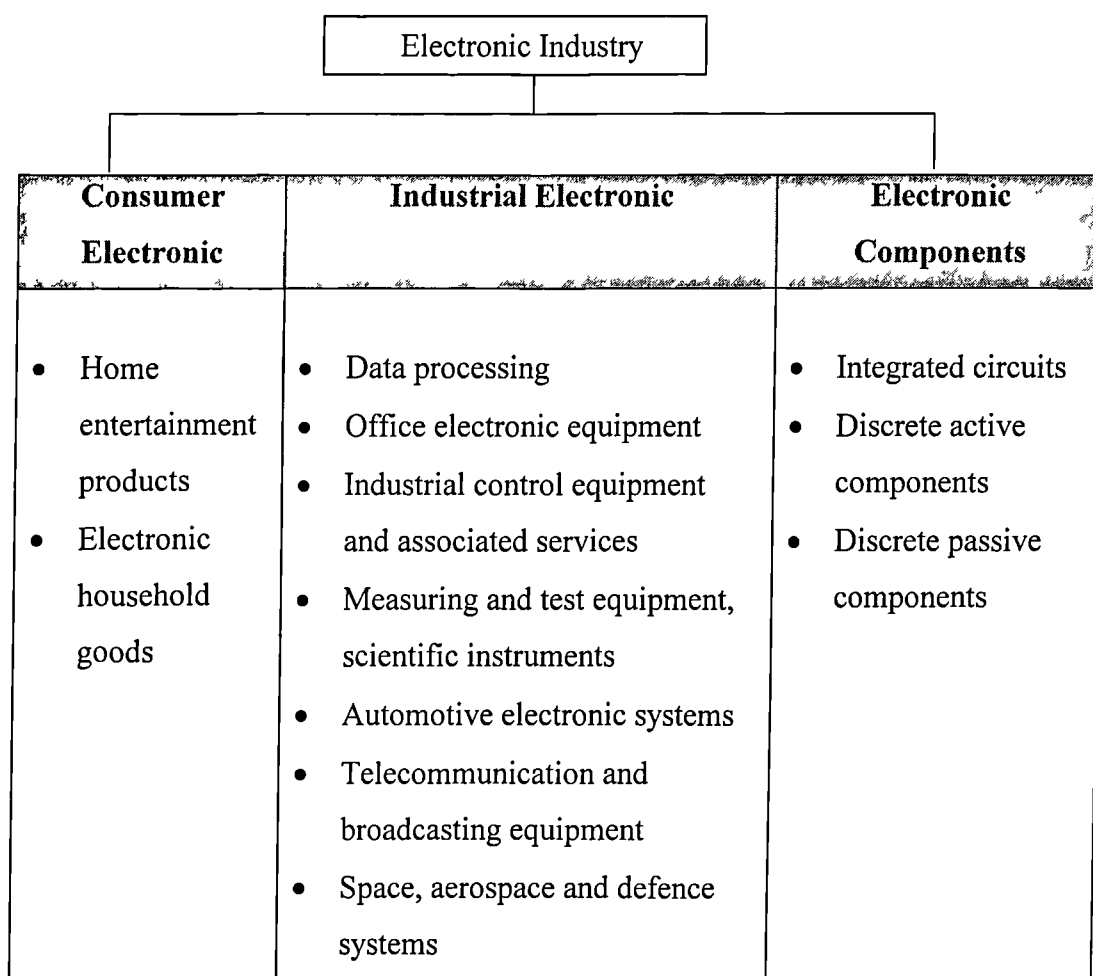
### **Industrial Technical Assistance Fund (ITAF)**

	<b>ITAF 1</b> Consultancy Service Scheme	<b>ITAF 2</b> Product Development And Design Scheme	<b>ITAF 3</b> Quality and Productivity Improvement Scheme	<b>ITAF 4</b> Market Development Scheme
<b>Objective</b>	<ul style="list-style-type: none"><li>- For expansion and/or diversification</li><li>- For modernisation and upgrading of technical and management capability</li><li>- For improving quality and productivity</li></ul>	<ul style="list-style-type: none"><li>- To undertake product development and design</li><li>- To apply indigenous technological know-how, so as to develop new products or processes</li><li>- To improve its existing product/process</li></ul>	<ul style="list-style-type: none"><li>- To help the company improve its quality assurance system in line with the requirement of the National Certification Scheme and other standard scheme of SIRIM</li><li>- To encourage SMIs to upgrade management quality</li></ul>	To assist SMIs to export its products and build up export marketing expertise
<b>Implementing Agency</b>	BPMB	SIRIM	SIRIM	MATRADE
<b>Maximum Grant</b>	RM40,000	RM250,000	RM250,000	RM40,000



## **APPENDIX 5**

### **a) Classification of the Electronic Industry Subsector**



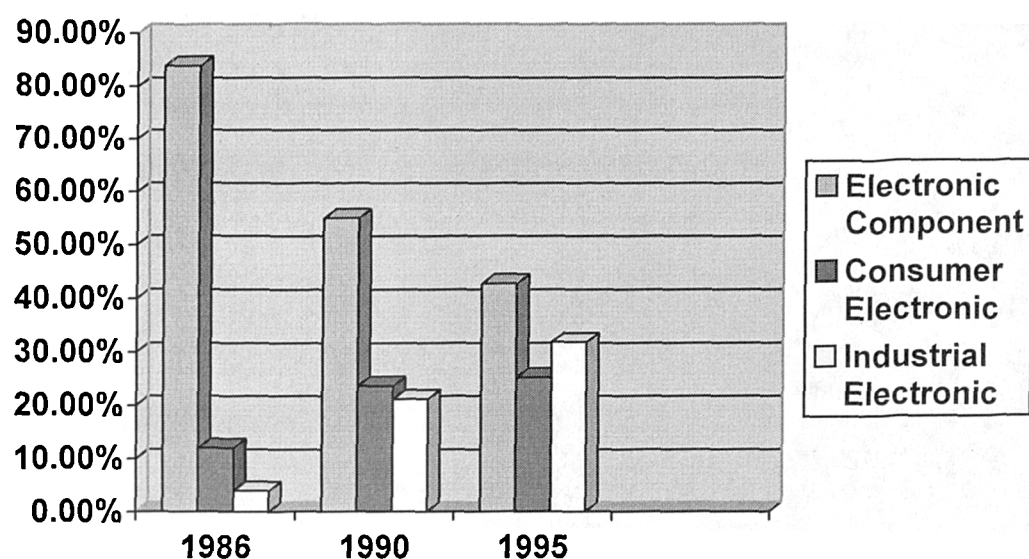
*Source: Mida/Unido, Medium and Long-term Industrial Master Plan (1985-95)*

### **b) MALAYSIA: Electronic Sector Export According to Product Categories (RM billion)**

Year	Electronic Component	Consumer Electronic	Industrial Electronic
1986	5,500.0	922.0	146.0
1990	12,777.0	5,485.8	4,887.5
1995	36,421.6	21,407.0	21,148.3

*Source: Statistic department*

**c) MALAYSIA: Electronic Sector Output Structural Change According to Product Categories (% of total export)**



**d) MALAYSIA: THE CONTRIBUTION OF ELECTRICAL AND ELECTRONIC PRODUCT TOWARDS EXPORT BY MAIN CATEGORIES, 1995**

Category	World Export (,000,000) (US\$)	World Export (,000,000) (RM)	Malaysian Export (,000,000) RM	Contribution to World Market (%)
Electrical Appliances	140,641	351,503	2,820	6.4
Electrical Industrial Apparatus	131,506	328,765	3,477	10.6
Semiconductors	135,800	339,500	32,844	17.0
Consumer Electronics	47,811	119,527	21,407	2.5
Telecommunications Equipment	151,128	377,820	9,445	2.5
Computer & Peripherals	129,245	323,113	6,009	1.9

Source: *The Second Outline Perspective Plan Report, 1996*

## **APPENDIX 6**

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### **INTERVIEW GUIDE**

#### **Exploring the Nature of Financial Management in Small Firm**

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##### **I) General characteristics of the firm**

- age, ownership and legal form
- management resources (education, experience, adequacy and outsider's help)
- business portfolio and market

##### **II) General characteristics of the owners**

- goal or motive
- desire for control and independent
- business experience and business confident
- financial management educational background
- the state of financial management knowledge
- perception toward the concept of risk, interest, time value of money and wealth?

##### **III) Investment decision making**

- What initiates investment decisions?
- amount and purpose of each decisions
- the information gathered
- evaluation of alternative actions
- reasons for taking and not taking particular investment
- materialisation of the concept of risk and time value of money
- reasons for using or not using prescribed techniques

##### **V) Financing decision-making**

- reasons for seeking outside financial help
- use of financial plan to determine the amount to be raised and for making advance arrangement
- awareness of alternative type of financing
- reasons for preferring a particular type of financing
- consideration given to the concept of risk (financial risk) and return (cost of capital)

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## **Interview Schedule**

### **Exploring the Nature of Small Business Financial Management**

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- **Introduction**

- **Purpose of the study**

⇒ The purpose of the study is to explore the nature of financial management in small firm by investigating the financial decision making processes. I am particularly interested in how small businesses make important financial decision.

⇒ The finding from this study will help the design of appropriate and practical financial management for the used in small business as oppose to adopting the large firm tools and techniques.

- **Tape recording, note taking and confidentiality**

⇒ Reason for tape record- it is important for me to capture your words and ideas; using tape record will enable me to do this.

⇒ I may also take some notes while conducting the interview so that I can keep track of the interview as it progresses.

⇒ Any information you give will be treated as confidential and will only be used for research purposes. Nothing that you say will ever be identified with you personally and you will not be identified by name as a study participant.

- **Turn on the tape Recorder and test it together**

\*\*\*\*\*INTERVIEW QUESTIONS\*\*\*\*\*

**SECTION 1: GENERAL CHARACTERISTICS OF THE FIRM**

Firstly, I would like to get some general information about the firm; about its ownership, activity, market, employment and management structure.

**A. Ownership and legal form**

A1. When did the firm start trading?

A2. What is the current legal status of the firm (type of registration) ?

A3. Has there been any change in the legal form of the firm since the firm started trading?

if so, a) when?;

b) what was the previous legal form?

c) why change?

A4. How many persons are currently involved in the firm ownership?

A5. How many owners besides you that are actively involve in the management?

A6 Has there been any change in the ownership since the firm started trading?

if so, a) when?;

b) please explain about the nature of the change.

**B. Business portfolio and market**

B1. What are the firm's principal products?

B2. Apart from manufacturing, are there other sources of income to the firm?

B3. Currently, how many customers do the firm has?

B4. Does the firm have any form of agreement with any of the major customers (e.g. subcontractor).

If so, a) please explain;

b) what percentage of the firm's last sale were made within this agreement?

**C. Employment, Management Structure and Management Resource**

C1 What is the total number of full time line workers currently employed by the firm?

C2 How many of them are management executive?

- C3. Do any of the managers have any kind of management qualification? Please explain.
- C4. Please describe the management structure of the firm.
- C5. Do any of the managers have experience in another firm? How many?
- C6. Is there anybody else outside the business (relative) who helps with the management of the business? if yes in what way?

**D. The Strategic Development of the Firm**

1. Please describe to me the development of the firm from the start till now.
2. What was the firm's turnover in:
  - 1994?
  - 1995?
  - 1996?

**SECTION 11: GENERAL CHARACTERISTICS OF THE OWNER (S)**

**A. Motives, goals and personal portfolio**

- A1. Now I would like to focus on you as the owner of the firm. Can you explain, why do you get into the business in the first place?
- Was there any other reasons?
- if no mention of wealth, go to (A2) if not go to (A3)*
- A2. Many people go into business to make money or to be richer, how about you?
- A3. Now, what is your future plan for the business?
- if no mention of grow, go to A4, if not A5*
- A4. You didn't mention about the plan for growth, does that mean you don't intend to see the firm grow? Why?
- A6. Can you tell me your experience in business before you form this firm?
- A9. Do you have other major investment outside this business? other business? stock market investment?

**B) Education and financial mangement background.**

- B1. Do you have any business-related experience before this?

B2. Have you undergone any formal training (college or training programme) in business management? Where and when?

B3. Have you undergone any formal training on financial management and accounting?

B4. Do you think knowledge in financial management is important to you?

- which particular knowledge are you referring to?

B5. Do you know about;

(i) 'NPV' and 'IRR'?

(ii) 'time value of money'?

(iii) 'present value' or discounting process?

#### **SECTION IV – FIXED INVESTMENT DECISION**

In this section, I'm interested in knowing how you or your firm made decision regarding capital investments. What I mean by capital investments are those that give return for more than one year.

1. So could you recall, the investment or expenditure that the firm undertook over the past 2 years?

2. Lets focus on the \_\_\_\_ (first investment);

a) What was the amount involve?

b) Can you describe the process involved before the decision was made?

2. So what was the main reason for the investment?

3. What were other reasons?

4. What were other alternatives available to the firm if the investment was not made?

5. Was there any business proposal? paperwork? calculation? Do you mind if I have a look?

- Which part of the paperwork/calculation really influenced your decision?

- What about this (profit, npv, irr etc)?

6. How did you prepare this?

- Did the firm use outside consultant?

- Who provided these figures?

- You used x% as the discount rate. Why do you think its a reasonable rate?

7. So what was the main reason for preferring this investment instead of the alternative (s) ?
8. How was the investment financed?
9. Did the interest rate at that time influence the decision? How?
10. Did the tax has any influence on the decision? How?
11. Next, I would like to get the same information regarding the \_\_\_\_ (the next decision) ,  
*repeat Q2 to Q10*
12. Have you dispose / sell off any of your asset?  
a) Why do / don't the firm see the need to dispose the asset?  
*repeat Q2- Q10*

## **SECTION V - FINANCING DECISION-MAKING**

In this section, I would like to focus on financing decisions which are decisions relating to raising additional capital for the use in the firm.

1. Please recall the most recent circumstance where you have to find outside financial help.  
a) What was the reason?  
b) Where did you get the money from?  
- the same place as before?  
- why?
6. How do you determine how much you need?
7. Was there any other alternative ways of getting the money?
8. Why did you choose to borrow instead of; finding new partners; use retain profit?
9. Do you think financing is a big problem for the firm now? in the past? please describe.
10. Do you think good relationship with the bank important in this respect?  
*If no mention of financial planning, go to 11, otherwise 12*  
*if no mention of financial risk or leverage, go to 13, otherwise 14*
13. What do you think of the possibility of the firm not meeting interest obligation?



- any effect on financing decision?
14. Just now you mentionned about risk, can you explain more about it?
- use any measurement?
  - effect on financing decision?

#### **SECTION V - CLOSING QUESTIONS**

1. Is there anything else you want to say about this topic of discussion?
  2. We are at the end of the interview now. Is there anything you would like to ask me?
  3. If possible, I may be going back to the people that have been interviewed to ask them a few more questions. Would you be willing to talk with me again?
-